Arboriculture — Treatment of the Soil.

AT the close of an article on "TRANSPLANTING," in our March number, we promised some hints on after-culture, which we now proceed to give as far as relates to the cultivation of the soil.

JOHN J. THOMAS, who is a close and accurate observer, and by no means prone to make exaggerated statements, says in his treatise, *The American Fruit Culturist*, that more trees are lost from negligent and improper treatment after planting, than from all other causes combined. The conductor of one of the most extensive nurseries in this country — a man of great experience and very extensive observation — said to us, a short time ago, "I know of no way in which you can do horticulture a greater service, than to urge upon people who plant trees, the importance — nay, the *downright necessity* — of better cultivation than that which prevails at the present time." "Every day," said he, "they come here and make long and bitter complaints that their trees have died, or have made no growth; and wherever I go, I see trees in orchards, gardens, lawns, and pleasure-grounds, in a stunted, sickly, and dying condition, mainly in consequence of careless and unskillful culture of the ground. If the evil can not be completely reached through the press, the friends of arboriculture should raise a fund, and employ a competent person to go out as a missionary among planters, and preach on this text, '*Good Cultivation.*' If it were possible to compute the loss which this country sustains annually in the mismanagement of trees, the result would be astounding."

We are well persuaded, from our knowledge of the manner in which trees are managed, that there is great room for improvement; and not merely among the agricultural classes, whose attention is chiefly absorbed in their farm crops and stock, and who consider trees as of comparatively little importance, but among those who give a large share of attention to horticulture, and have learned to appreciate both its pleasures and profits. Some are careless: they get their trees planted, and no doubt intend to give them all necessary attention, but unfortunately they forget; other matters more pressing, and for the time apparently more important, present themselves, and the poor trees are left to fight their own battles as best they can. Others are careful and attentive to their trees, but do not really understand what good cultivation is; while they flatter themselves they have done everything for them that could be done, they have scarcely done anything useful or effective. The misfortune is, a very large portion of those who plant are not half in earnest; they go about it without the slightest experience; and instead of making a deep and thorough search for information in books, and in the example set by experienced and successful cultivators, they are satisfied with the merest inkling of information — a simple say-so of a neighbor, which is as likely to be a false guide as a true one. This will never do — there is no excuse for ignorance now in this country; books and periodicals are numerous and cheap, and examples of actual practice are everywhere to be found, from which to gather instruction.

We have observed that within the past year or two, new zeal has been awakened among the better class of cultivators, on the subject of *high culture.* Instead of devoting their time and attention to the collection of new, rare, and wonderful things, they are endeavoring to bring old, well-known, and well-tried objects, to a higher and more perfect standard of perfection. And this is a hopeful sign. We have no admiration to bestow on a collection of ill-grown, half-starved trees and plants, however rare and varied it may be. It affords us no pleasure, nor can we see how it affords any one pleasure, to see trees and plants pining under neglect and bad treatment. As well might we take pleasure in gazing at an unfortunate prisoner through the iron grating of his dismal cell. Give us half a dozen trees well cultivated, with health, vigor, luxuriant beauty, and productiveness, expressed in every leaf and limb, rather than an hundred lean and hungry. Give us one dish of well-grown, beautiful fruits, rather than bushels of "windfalls;" or one pot-plant showing in its well-proportioned form and luxuriant growth skillful and careful training, rather than a houseful of lanky specimens that speak to us only of pot-bound roots, bad soil, careless watering, and bad ventilation. "Whatever you do, do it well," should be the motto of every cultivator.

It is unnecessary to say that the health and vigor of trees depend almost entirely upon the condition in which the roots are placed, because the roots perform the important office of feeders. The spongy points, or extremities of the roots, are like so many mouths, through which the supply of food must pass; and if these are bound up in a compact mass of earth, impenetrable in a great degree to air and moisture, it is impossible for them to find the necessary supply of food. No matter how rich the soil may be, if not in the proper mechanical condition, its fertility will be of no avail; because the chemical combinations which prepare the food of trees and plants can not go on in the absence of air and moisture. Here lies the prime defect of cultivation generally; it is not deep and thorough enough to *reach the roots.* We see people who call themselves very careful cultivators scratching the surface of a narrow circle around their trees with a common hand-hoe, and flatter themselves this is good culture; but if they reflect a moment, they will see their error. What they have done is a mere mockery—no better than the scratching of a sprightly bantam. The points of the roots extend further from the tree than most people suppose; and the earth should be kept completely pulverized all around them, and *beyond* them some distance. Anything short of this is labor lost.

Nurserymen have good opportunity of ascertaining the influence of deep and frequent loosening of the soil. The usual practice in this country is to plow between the rows of trees, as deeply as a one-horse plow can go with safety to the roots, and then to follow with a cultivator or horse-hoe. The plow is used two, three, or four times a year, according to the stiffness or looseness of the soil, and the cultivator as often as once a fortnight say from May to October. This is not only an economical mode of culture, but, in this country, the very best that could be followed. It protects the trees against the effects of our long and severe drouths. It is very common to see nursery trees, thus treated, in a fine growing condition; while others, that have been merely surface-dressed with a hand-hoe, are completely at a stand still. If we turn

over ground that has been kept finely and deeply pulverized by frequent stirring, we find moisture even in the dryest times; while ground that has been left unstirred until it has become hard on the surface, will turn up as dry and as warm as though it had been baked in an oven. In our own grounds, a plot of Norway Spruce is planted in beds of six rows each, with a distance of about eighteen inches between the rows; the plow and cultivator can not pass between them, and they have to be hand-hoed. Between the beds, however, there is a space of three or three and a half feet, which is regularly dressed with the plow and horse-hoe; and the rows on either side of this space have in three years grown nearly twice as large as those dressed with the hand-hoe only. One year we took it into our head to grow a crop of Carrots among some rows of young Apple trees. The rows were three and a half feet apart, and we sowed one row of Carrots in the center. This prevented the use of the plow and cultivator, and we could use only the hand-hoe. In the fall we observed that a portion of the plot of Apple trees not cropped with Carrots, but worked in the usual way with plow and cultivator, were about twice as large as the others, and they were really marketable two years sooner.

We find that deep culture has the same effect on root crops—Beets, Carrots, Turnips, &c.—as it has on trees; the frequent use of the cultivator will produce twice the bulk on the same ground as hand-hoeing merely. This is our experience, at least.

But we will be told that it is impossible to use the plow and cultivator in orchards and gardens, and on lawns, door-yards, &c. We know this; and our object in alluding to them is to show the influence of deep culture around the roots of trees. Where they can not be used, we must substitute some other implements that will serve the same purpose. The common hoe will not; it is a poor implement, useful in a few instances only, and far more popular in this country than it deserves to be. In the case of young orchards, we would by all means advise cropping the ground with something that would require constant cultivation—Potatoes, Carrots, Beets, Turnips, &c. Grain, Grass, and Corn crops, should be avoided as utterly ruinous to young trees. Corn is less so than the others, because it is plowed and hoed; but it smothers the trees, if young, and puts a complete stop to their growth. Where a grain crop may be absolutely necessary in an orchard, a strip should be left in a line with the rows of trees, so that the plow and cultivator might be used.

In plowing near trees, a slow and gentle horse should be used, with long traces, which give steadiness to the plow. The whiffle-trees should be as short as possible, and have on each end a piece of cloth or India rubber, so as to prevent injury in case it strikes the tree. In this way a careful, handy man, can plow within a few inches of the trunk of the tree. In plowing directly over the roots, the furrow should be regulated so as not to cut or tear them, and the plowing should always extend at least two or three feet beyond the roots.

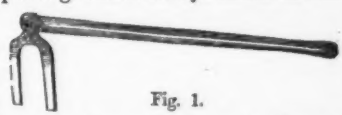


Fig. 1.

Where the use of the plow and cultivator is impracticable, a *forked hoe*, (fig. 1,) with long and stout prongs should be used repeatedly during the season. This implement is much better than a spade, as it does not

cut the roots; and it is better than the common hoe, because it enters the ground deeply, and gives it a thorough stirring up. Such an implement as this is extensively used in France. In the nurseries it is in general use, the rows being generally so closely planted as to prevent the passage of a plow or cultivator between them. The latter implements are considered by European nurserymen as somewhat barbarous at any rate.

We have known people to be so fearful lest they should disfigure their lawn, that they would endeavor to plant trees in the smallest possible openings, and would immediately replace the turf around them. Is it not evident that a tree so placed must either die or grow feebly. To plant a tree on a lawn properly and successfully, a wide hole should be cut for it—*twice or three times as wide as the roots*—and the whole of this circle should be kept clean and deeply pulverized for several years, until the tree has sent out numerous and powerful roots in all directions. No matter when or how trees are planted, this after-culture is absolutely necessary; and we will say to those who have planted recently, that unless they bestow such labor on their trees, better for them now to pull them up and burn them, and thus save all further expense.

Mulching—which means covering the ground with half-decayed manure, decayed leaves, or some such material—is a commendable practice in the management of young trees, and of dwarf fruit trees, and all others whose roots are near the surface, and confined to a small space. It not only keeps down a growth of weeds, but guards the roots against frequent changes and the ill effects of a drying atmosphere. This, however, will not render cultivation unnecessary; for with all the mulching the ground will settle down and become compact, unless of an extremely sandy or porous nature.

In speaking of transplanting, we objected to the application of manure around the roots, because they were not in a state to make use of it; and we advised its being furnished as a top-dressing after the trees had become established and the roots active. This top-dressing should never be applied as long as the trees show sufficient vigor and luxuriance; but when necessary, it should always be applied in the fall, so that during winter and spring it may be dissolved and converted into a state in which it may be taken up by the roots. This applies to all sorts of natural and artificial manures or composts. When applied in spring, they have no time to be dissolved before the heat and drouth of summer comes, and they are dried up, becoming an injury rather than a benefit. Liquid manure, however, may be applied during the growing season, and will be particularly beneficial in dry weather. It should be applied weak, however, and in sufficient quantity to reach the roots; a small portion thrown on the surface evaporates immediately, without effecting the least good. In top-dressing with manures and composts, a sort of forked spade should be used, (fig. 2,) which is far better than a common spade, being much less liable to injure the roots; and it stirs up and loosens the soil without turning it over, just as a subsoil plow loosens and pulverizes the subsoil without throwing it up to the surface.

Fig. 2.

EVERGREEN TREES.—THE AMERICAN HOLLY.

BY REV. JAMES RICHARDSON, JR.

We took occasion so often, while our universally lamented friend Downing was at the head of the *Horticulturist*, to discourse on evergreens and their culture — their value in giving warmth and shelter to tillage land, their use in adding an air of comfort and elegance to the wintry landscape, and the peculiar beauty of our native trees, — that, to some of our readers, we may have grown wearisome, and seem already to have exhausted the subject. So peculiarly beautiful, however, and at the same time so little known is the tree whose name makes part of the heading of this article, that, at the risk of being regarded as tedious, we can not but feel it a duty to urge a few words in its praise, for the sake of calling the attention of planters to its particular characteristics — its beauty and its value.

But few of the denizens of our brick-and-mortar cities, and our busy, crowded towns, are aware of the wealth of beauty that our native American forests, and the very woods about them, contain, to adorn the lawns, the shrubbery, and the hedges of our home landscape, — the rich and luxuriant vines and plants and shrubs and trees, with their various foliage and blossom, and especially the variety, grace, and elegance, of our own native evergreens. When a boy, with what a thrill of delight did we hail the sight of the princely blooming Rhododendron, as, through vistas of mossy Cedars, the oriental magnificence of its perfumed blossoms burst upon our vision, as we fearlessly trusted ourselves to the quaking bog of the solitary swamps* where they unfolded their regal glories. With what eager enthusiasm, down in the deep, dark dells, or on the airy mountain steeps, did we follow, on and on, gathering, with a never satiated passion for beauty, the superb native boquets of Mountain Laurel, — now seeming like masses of drifted snow hidden away in the cool woods, as they paled in the deeper shadows — now blushing in the broad light of day into richer loveliness — or growing rosy and scarlet, as, higher up, they became flushed with the more exhilarating air and brighter radiance of the mountain cliffs. Search the world over, and where will you find more magnificent and splendid evergreen shrubs than these brilliantly blooming Kalmias and Rhododendrons of our chill and homely New England forests? And what sight more rich and enchanting, than a mass of these charming flowering shrubs half-concealed, half-revealed, beneath the groups of trees that shade our dwellings, or resting their glossy leaves and queenly flowers on the green and shadiest portions of our lawns! Dear to us, too, is the bright *Prinos glaber*, or Ink-berry bush, humble though it be and unknown to fame, with its crown of dark, shining foliage, whose depth of rich brilliant green the severest frosts of winter never deaden, and the polished gloss of whose varnish neither the roughest storms nor the most freezing wintry winds can tarnish: but, in sunshine and in storm, in winter's cold as in summer's heat, there it is, always so bright, so deeply, radiently green, reflecting the light and glory of the

* Bigelow and others are mistaken in supposing them to be found in only one swamp, near Boston; we have known several in different towns.

heavens; and, when these are shrouded, seeming like a living smile beaming up out of the earth. No foreign, costly Box tree, with all its wide renown, can compare with this simple, rustic beauty, of our plain old colony lands. Then edge your groups and borders, and mingle your shrubbery with this humble native New England evergreen. There, too, is the feathery Hemlock; and the dark, dense fringe of the Black Spruce, that, in cultivated grounds, equals if not excels in beauty of foliage its more distinguished and aristocratic Norwegian brother; and the Yellow Spruce, with its bright sunshiny hue, making the darkest day look gladsome, that in rich deep soils is often mistaken for the Norway. The Fir, too, despite its formal stiffness, as it sends its stately spires up among the ancient Elms and Ash trees that surround the antique parsonage, or that embower the hospitable mansion of the good old country gentleman, telling of the culture and refinement of other days, and the wealth and worth of the good old times that have gone, is never to be wholly spurned. And, oh! the glory and the grandeur of the giant White Pines, with their great mossy trunks, rising up from the brown-carpeted and solemn aisles, like pillars in a mighty cathedral—the pillars of God's first temple—with their leaves like a myriad harp-strings tuned to worship, or prophesying, in the harmonious murmurs of their unending song, of their future home amid the ceaseless roaring of the waves, whose crests they shall nod over as tall spiry masts, or breast as stout timbers of some gallant vessel, in years to come. Oh, plant a grove of Pines, good friend, on yonder bare and desolate-looking ridge, or over that barren, sandy hill-side, for your children and your children's children to rejoice and glory in. Were we the king of this fair land, it would be one of the earliest proclamations of our benevolence, that evergreens should be planted, among other shade trees, on all the roads and avenues of the kingdom, on the northern exposures of the dwellings of the people, and on all the breezy summits of the hills, to give defence and shelter, warmth and beauty to the landscape.

But we are forgetting our friend the Holly tree, in our thought for the rest of the evergreen brotherhood. Of all our beautiful native evergreens, there is none more peculiar and striking in its beauty than the *Ilex opaca;* and I am charmed now, as I gaze out through the frosty air of the bitter winter day, on the rich, dark, glossy green of its broad and quaintly-cut spinose foliage among the shrubbery. Late in the autumn, in our rambles in the interminable woods of the "Old Colony,"—for though the first settled portion of the country, it is now the most of a wilderness of any, with miles on miles of uninhabited forest, where still the light-footed deer has his covert,—in an open pasture ground we came suddenly upon several splendid specimens of the American Holly, each standing isolated, and glowing in the late autumnal sunshine; and, truly, no sight of the kind was ever more charming to the eye of a lover of beautiful nature. Though not more than six or seven feet high, and extremely thick-set, they were perfect in shape, and loaded with their coral fruit; and the contrast of the deep glossy foliage with the brilliant scarlet berries with which the branches were so thickly studded, presented a *coup d'œil* that excited our most enthusiastic admiration. In all our various excursions in the woods and fields, from childhood and youth upward, we had never met with any wild growing thing so beautiful,

so charming, so altogether *perfect*, and so desirable as an ornament for the cultivated lawns and shrubberies. Nay, more than this, we feel that we can say most sincerely, that we know of no prized and costly exotic from far-off foreign climes, that can surpass it, especially when thus decked out with its jewels of brilliant coral. And, not only the size and rich deep green of its foliage, but the *quaint and rare cutting of its leaves*, give to it a striking and peculiar effect, and add much to its value. We would gladly have paid an extravagant sum to have had even one of these charming specimens, in all its perfection, growing on our own grounds; but, finding from the size of their trunks, and their ages, as well as from the stones and rocks among which they grew, that we could not have the faintest hope of success in transplanting them, we bore away as splendid trophies—barbarous as it may seem—a load of branches, coral and emerald, for admiring friends, placing a rich boquet of them even in front of our church pulpit, where the usual offering of flowers is laid, which formed the fittest possible decoration of the sanctuary, the dark and glossy leaves of strange and mystic shape, and scarlet fruit, harmonizing finely with the dark, carved rose-wood of the sacred desk.

The Holly, with us, is seldom found in the open ground; it generally sequesters itself in the thicket of the forest, where, in the solemn shadow, and under the drip of the trees, it best flourishes. This peculiar characteristic of the Holly tree constitutes its great excellence for planting out as an evergreen among other trees and shrubs. Although, perhaps, it grows in more beautiful shape, and makes a more perfect tree, when standing unsheltered in the free air and broad sunshine, yet its growth in such situations is exceedingly slow and laborious, and without a great deal of moisture it probably would not attain a height of six feet in twenty years; while under the moist shelter of the forest it increases rapidly, making often a foot or more of growth in a year, and we found numerous specimens in our after excursions that had thus attained the height of twenty-five to thirty feet. There are so many of our most ornamental evergreens—as the Firs, Spruces, &c.,—that refuse to flourish under the shade and drip of other trees, that a tree that makes its most rapid growth, and *rejoices* in such situations, is a very great desideratum. We have been compelled to leave awkward spaces and ugly gaps in plantations of this kind, from the proximity of some large deciduous trees, or the broad shade of some grand and beautiful Elm, whose glories we could not spare, though it would permit no other growth under its far-extended branches. In such places, however, our friend the Holly tree finds its natural and appropriate shelter, and flourishes in grateful luxuriance. There its leaves assume a darker, richer, glossier green, kept always moist and darkened from the summer's "too excessive ray;" and its otherwise dwarfed proportions will thus assume a lighter form and a more stately size.

In transplanting the Holly, we have generally found the roots of the small trees to run near the surface, and above the roots of other trees; and this renders them easy to take up when young. In re-setting them, we would suggest the commixture of stones and rocks in the soil in which they are planted, and a good covering of chips and forest leaves

We have made collections of the berries also, as well as of the young trees, and hope to interest our horticultural friends in their cultivation. There is no plant that would make a more quaintly beautiful and striking hedge than this our native *Ilex*. In the open ground it is of remarkably thick growth, and its stiff and well-armed leaves would render it impenetrable even to fowls and smaller animals, and no ox or wild bull even would dare to thrust his muzzle more than once into their prickly thicket; for, in words from the poet SOUTHEY's ode to the Holly tree,

"Below, a circling fence, its leaves are seen,
Wrinkled and keen;
No grazing cattle through their prickly round
Can reach to wound;
But, as they grow where nothing is to fear,
Smooth and unarmed the pointless leaves appear."

As beautiful and as famous as the English Holly has been for ages, it can not be cultivated in our severer climate and more changeable winters; but our own Holly, I think, will be found by culture to be not a whit inferior to its more distinguished foreign brother, and to deserve all the enthusiastic encomiums that it has received at the mouths of the poets; and we may say of our New England *Ilex*, in the words of ELIZA COOK—

"The Holly! the Holly! oh, twine it with Bay—
Come, give the Holly a song;
For it helps to drive stern winter away,
With his garment so sombre and long.

"It peeps thro' the trees with its berries of red,
And its leaves of burnished green,
When the flowers and fruits have long been dead,
And not even the Daisy is seen.

"Then sing to the Holly, the Christmas Holly,
That hangs over peasant and king;
While we laugh and carouse 'neath its glittering boughs,
To the Christmas Holly we'll sing."

ON THE EMPLOYMENT OF STATUARY IN THE DECORATION OF GARDENS AND PLEASURE GROUNDS.

BY B. MUNN, NEW YORK.

THERE is perhaps no branch of Landscape Gardening in which the correct principles of taste are so frequently violated as in the introduction of statuary into ornamental grounds, and yet there is none in which the rules by which it should be regulated have been better defined. It is not unusual, for instance, to see rustic alcoves and bridges, or summer-houses in the Swiss style, *ornamented* with statuary in marble or white stone. Nothing can be a greater mistake. However beautiful in themselves,

such objects are wholly at variance with the situation; and it is impossible to introduce them in such positions, without injury to that consistency of purpose which is a primary consideration in artistic arrangement.

There are two modes of placing statuary in grounds. One is, to connect it with architectural structures — either the house, or some of the subsidiary edifices, such as a conservatory or other building, (and this is generally deemed the most desirable situation for it); or else to place it in the vicinity of avenues or walks, in the midst of the rural scenery of the place. In connection with the house, or with any important subsidiary edifice, it is considered admissable to introduce almost any species of sculpture; because, where it is supported by a mass of building, the character of art *in both* maintains that "unity of purpose" which should be apparent in all attempts at tasteful arrangement. But where it is contemplated to introduce statuary into rural scenery, without its being in view of architecture of any description, two circumstances require attention; the one, the kind of scenery; and the other, the subject the sculpture is intended to represent.

In scenery now styled *Gardenesque* in character, in which the "beauty of repose" is the prevailing feature, provided rustic ornaments (such as alcoves constructed of rough wood) are not present, statuary of suitable subjects may be introduced with perfect good taste. In reference to statuary placed in such scenes, those are best adapted to the purpose which embody some rural conception — as Flora, shepherds, or some idea which is usually associated in the mind with the relation of country life. But if the statuary introduced into rural scenes is in considerable quantity — as, for instance, a series of statues, busts, or vases on pedestals, within sight of each other on either side of a long wide walk or avenue — the subjects may be as varied and as diverse as may be wished: because, in the latter case, by their number they become an important feature of themselves, indicative of an intention that they shall command the attention of the spectator independently of the surrounding scenes, in the same manner as would be the case in a sculpture gallery; whereas, in the instance of simple *specimens* of statuary placed in the midst of rural scenery, it is evidently proposed that it shall be viewed rather as an additional ornament, to add effect to the surrounding beauties, and a propriety of subject is therefore required.

In scenery of the grand and picturesque character, such as Salvator Rosa portrayed, whether this is derived from the presence of rocky or barren scenery, or from the general disposition of the natural features of the place, statuary must be introduced with great caution; for in such situations it is very difficult to select subjects which are not in themselves repulsive to the ideas suggested to the mind by the ruling character of the scene. In such positions, I should hesitate much to recommend the introduction of statuary at all, that represented living objects, except equestrian statues, or statues embodying some mythological composition associated with the brute creation. Vases and architectural fountains or fragments are among the most successful embellishments for which the picturesque can be indebted to the chisel of the sculptor.

In whatever situation statuary is placed, therefore, in the open air, it becomes necessary to well consider the appropriateness of subject and of situation; and this is the

more imperative in proportion as the desire exists to place statuary in single specimens alone.

The foreground of a large vinery affords a most appropriate situation for the formation of a flower-garden in the Italian style, in which *statuary* is necessarily the predominant feature; but it only admits of adoption in two situations — the one immediately adjoining the house, and the other in connection with a conservatory of sufficient extent to support the general design. The low terrace wall is an indispensable adjunct to the introduction of this style. It serves the double purpose of isolating from the adjoining plantation the geometrical character of the flower-beds which the adjacent architecture renders it necessary to employ; and it forms, as it were, a general base for the assemblage of sculpture distributed through it; for when the statuary is placed, and the low terrace wall with its wide coping of stone is erected, to the eye of a spectator viewing the whole from a short distance, the top of the terrace wall will appear to form a common base for the whole of the statuary.

In the form of the flower-beds, in this style of garden, angular and straight lines alone should be made use of, as being most in keeping with the architectural character of the whole. Vases or urns should be placed at the several corners of the terrace wall. Plants may be placed in the vases in the summer, but they should be confined to those species which are of a formal, stiff outline, as being most consistent with architectural decoration — such as the *Agave Americana*, the *Yucca*, the Cacti family, *Hydrangea*, Orange trees, and some others.

DIELYTRA SPECTABILIS AS A GREENHOUSE PLANT.

BY EDGAR SANDERS, GARDENER TO J. F. RATHBONE, ALBANY.

This Chinese production is worthy a place in every greenhouse, its singular and peculiar shaped flower being quite distinct from anything out at the same time — a point of considerable importance in a selection of plants. Its habit, too, is drooping and graceful, its delicate rose-colored and purple-tipped blossoms hanging like ear-drops from several axillary racemes. It is probably nearly or quite hardy enough to stand our winters, of which I am unable to speak from experience; but, with a slight protection of its roots it will undoubtedly stand, and form a magnificent object in summer. Its culture in the greenhouse is simple, requiring no important room a great portion of the time; and, by having a succession of plants, may be had in flower from the first of February till those in the open air come in. It is very impatient of much heat, and, if fine specimens are wanted, should at no time receive a temperature over 50° artificial heat; solar heat it does not mind.

We procured a huge root from the open ground of a nursery, on the 4th of November, and gave it the following treatment. It was potted at once in a 13-inch pot. The root had to be divided into three parts to get it in, using loam and rotten dung — two parts of the former, one of the latter — with a little sand, to fill up the remainder

of the pot. It was then set in the coldest part of the house, on the floor, and but seldom watered till it began to push, which was about the middle of January. It was then more freely watered, and as soon as the growth had lengthened to six inches, lifted to the front stage. It now began to grow rapidly, and was occasionally treated with a dose of weak liquid manure water. On the 23d we had it at our show, and on March 7th made the following entry in our note-book: "*Dielytra spectabilis*—thirteen spikes eighteen inches high, from four to six racemes on a spike, from eight to twelve blossoms on a raceme." It is still beautiful, and likely to be for some time yet, as several of the spikes that remained dormant at first have since started, and laterals spring from those that first flowered, which keep up a succession.

As soon as it has exhausted itself it will be cut into pieces, to form cuttings. These will be struck and turned into the flower-garden for summer display, from the roots of which a large stock will be laid in for next winter's operations.

[The *Dielytra* stands our climate at Rochester without protection. It is, without exception, in our opinion, the finest hardy herbaceous plant introduced within the last twenty years. Our experience with it in the house enables us to endorse all that Mr. SANDERS has said of it. Our artist has taken a drawing of this beautiful flower, which we shall probably give in the July number.—ED.]

THE CULTURE OF CELERY.*

BY WILLIAM CHORLTON, NEW BRIGHTON, STATEN ISLAND.

Earthing.—Where it may be required to have Celery early, the earthing must be commenced accordingly; but, generally speaking, too much hurry in this case is not good. One of the reasons why Celery is spongy and insipid, is owing to the soil having been in contact with it too long. While the temperature continues warm, and growth is proceeding rapidly, three to four weeks is quite enough to prepare for use; so that according to the time it may be wanted, the earthing may be commenced to correspond. There is no difficulty in producing it ready for table by the beginning of August, by a little earlier sowing and extra pains-taking; but more commonly it is considered quite early enough at the beginning of September. The old notion that this vegetable is not good until it has been nipped by the frost, belongs to bygone days, and it is time that we got rid of such ideas; be assured, that if the frost *acts* upon it, the flavor will be injured, and the crispness destroyed. When commencing to blanch, go over and break out all outside offshoots or decayed base-leaves; loosen up each side of the row, keeping clear of the roots; break up the soil well; lift the leaves up into a perpendicular position, and while holding them so with one hand, fill in and around with the other about six inches of earth, taking care that it does not fall down into the heart; and always choose a dry day for this operation. After pro-

* Continued from April number.

ceeding thus along the whole length, stretch a line about eighteen inches from the row on each side, give a cut outside the line, and lift up enough soil to make an equal surface with that placed to the plants. This process will make what was previously a trench into a bank, with the double row of plants in the center. As growth progresses, this operation will have to be repeated. A practiced eye requires no guide as to how often, or how much ought to be done, and no definite rule can be given; for where there is great luxuriance, more depth and often repeated earthing will be necessary; but if we take a medium average, once a week will be a general requirement for three or four weeks. Some persons do not earth at all until they intend to do it finally; but, excepting for the latest crops, or that which is wanted for spring use, this practice is open to much objection. In the first place, the stalks have by this time grown outward to a horizontal position, and become solid, so that they will break or split at the bottom, which brings on rottenness, and disfigures the form of the head. The soil also is more subject to fall down into the center by the great depth which is put on; and as the stalks have hitherto had light and air, the leaflets are more numerous and situated closer to the base, and consequently they have to be covered up. These often rot, and always prevent the young heart-leaves from ascending straight, the result of which is distorted form and crooked stalks.

With regard to that portion of the crop which is required for latter winter and early spring use, an exception to this is advisable; for, as stated above, if the soil remains too long in contact, the quality is injured. Therefore, in this case, do not earth up any further than merely to give an upright position to the stalks; and when it is to be done, finish at one or two operations. The best time to commence earthing this late portion, is a little before frosty nights begin to occur.

Protection in Winter.—Although Celery is very hardy in a natural or poorly grown state, it is soon injured by frost when gorged with luxuriance, or blanched; therefore, as we have it in cultivation, winter protection is necessary. It is also soon rotted or rendered insipid if kept too warm, on which account a temperature that is only a few degrees above the freezing point is best. Avoid close, damp cellars; for in such places it is almost sure to decay. Often as this plan has been tried, there have been few cases of success. The best method which has come under my own observation is as follows:—Choose a piece of ground where the water can pass off freely, and bed the heads in rows of about six in each, and in an upright position. Commence by raising a bank against which the first row shall rest; lift each head, and preserve the roots carefully, which may be done by cutting down one side of the row in which it has grown, and afterwards putting the spade under each plant. Before lifting, tie a piece of bast or twine around the upper part, which will prevent the stalks from breaking, and also facilitate the process. Remove all decayed leaves, and fix carefully against the bank almost close together; raise up in front enough soil to cover nearly to the top, leaving only a portion of the top leaves exposed. The next row may be a few inches asunder, and so on. Afterwards leave all uncovered until wet or frost sets in, when a coping of boards or shutters should be fixed over. Where there is not this convenience, a quantity of pea-stakes may be laid over the top; but whatever be used,

a coating of litter, pea haulm, or other like material, will be required to keep out the frost. It may also be left to winter in the ridges; but in this way a great quantity of covering is necessary, and which afterwards requires much labor to remove. The first is most economical, and is equally safe.

Saving of Seed.—As the saving of seed is of some importance, a few remarks on this head may be of service. Without stopping to discuss the physiological point respecting the reproduction of permanent varieties by seed, it is a well-known fact to those of experience, that Celery, although one of the most constant in this respect, is nevertheless disposed to sport; consequently, if any particular variety is wanted to be kept pure, those plants which are retained for this purpose ought to partake most truly of the peculiar characteristics of the kinds, and also should be removed from the influence of impregnation by other sorts. The first may be accomplished by choice of plants, and the latter by not having any other in bloom in the same vicinity. It is well, too, not to blanch, nor grow too luxuriantly, those which are intended for seed, as under these circumstances the structural texture is retained more solid, and the progeny will partake of the same property. Everybody knows that a spongy head of Celery is worthless, therefore we should use all caution to preserve the solidity; and the above items, if attended to, will ensure success. Notwithstanding the natural hardiness of this plant, there are some winters so severe and changeable that it is advisable to preserve, even in this case, the plants from extreme cold, for which purpose a cold frame is the most suitable; but if this is not convenient, a light covering of marsh hay or straw may be thrown over them, to prevent the effects of alternate frost and thaw.

With regard to different kinds, there are several shades of color, gradations in size, and variety in flavor, each being prized according to the caprice of different cultivators. Two classes are generally recognized, viz., Red and White. The Red is generally considered to be the hardiest, and it has more pungency in the flavor, partaking somewhat of the natural quality; and upon the acknowledgement of these properties is hung the faith of many persons. The fact is, that when Celery first became an established favorite, we possessed no really good kinds but what were red, all the Whites being then spongy in substance, and sweet and insipid in flavor; and it is readily seen from this why the White was more tender in winter. Of late years the latter class has been much improved, and we have now several kinds that are equally hardy, as firm and brittle in substance, and in every respect as good in quality, as is the Red. For the sake of experiment, three years ago I grew *Seymour's Red* (thought to be the most hardy of the Reds,) and *Seymour's White* (the kind that is so generally brought to market in this neighborhood,) in different ways, only that both were treated alike, and planted in the same row. At the end of winter, although both were good, the White was in the best order; and, so far as I have seen, this is the best variety that we have for general cultivation. These two kinds were raised by Mr. Seymour, late gardener to the Countess of Bridgewater, in England; and he certainly deserves the thanks of all lovers of good vegetables, for his persevering efforts in improving so desirable an esculent.

When winter is over, the seed plants should be removed carefully into a spot of very rich ground, and freely exposed to the sun, by which they will be invigorated and enabled to flower strongly; the seeds will be plump and well developed, and in their turn will produce strong and healthy plants. As all the seed does not ripen at the same time, it should be gathered at intervals, spread out upon paper in a dry but cool room, and when thoroughly dried it may be cleaned and stowed away in bags till wanted for use. Celery seed will keep good for several years, but the finest plants are raised from it while fresh.

To produce very fine Celery.—Hitherto I have only treated of this vegetable so as to produce an ordinarily good sample, and in a way that will pay the market-gardener; but if it be desirable to have extra quality and the largest size, some difference should be made in the culture. Celery will feed freely on very rich manures if judiciously applied, but not otherwise; and the best time to use such is during active growth, and after the greatest heat of summer is past. There is no difficulty in obtaining heads of eight to ten pounds weight, and in some instances even more, if the following directions be adopted:

Raise the plants, and plant out as before directed, with the exception of the trenches, which should be opened wider, and about half as much more well-rotted manure added. When a trifle advanced in size, and growing fast, place a few inches of fresh "maiden" earth along side of the stalks; and if there is a hog-pen at hand, procure a quantity of the drainings and slush, fresh as it is, convey it to your rows of Celery, and after raising a small ridge outside and away a short distance from the plants along the row, pour it on the surface. *Take care that this does not come too near the stalks*, or it will most assuredly rot them; and do not mutilate the roots, or they will be destroyed. Do not apply this or any other strong manure during hot weather, or the increased luxuriance will not bear the sun's rays, and the leaves will blister. A wet time is the best for this kind of application; and in the absence of frequent rains, use water very freely. If hog drainings are not to be had, a good but not equal substitute is dung-hill drainings, or guano dissolved in water at the rate of fifteen gallons to one pound. If the hog wash be used, one application will be enough; but of the others, a repetition every three or four days for three weeks will be necessary. The after-soiling may proceed as before advised, with the exception that if deferred longer the weight will be greater.

It may be thought that this is a strong dose; but we must recollect that it is only applied when growth is most active, and the plants under favorable circumstances as to temperature; and most vegetables will flourish at this period with manures of so rich a nature as to kill them at other times. It is from a want of knowledge on this very point, that so much mischief is frequently done in this way. What is here advised has often been done in my own practice, when wishing to obtain extraordinary results, and has answered the purposes for which it was intended.

The following criteria will show what a first rate head of Celery is, and how it ought to appear on the exhibition table. The weight may be from six to ten pounds. It should be taken up with the roots preserved, and cleanly washed. The external

form should correspond in length to girth — not short and thick, nor long and slender. The base immediately above the roots ought to be nicely rounded — not bulged, nor split; the stalks solid, brittle, straight, perpendicular to the base, with the leaflets confined to the upper part, leaving the stem clear below. The blanching should extend in the second inner row of stalks up to the leaves, and to the base of the outer ones; all inside of this ought to be clear and eatable, and proceed in the middle nearly to the top of the leaves: the whole available substance for use being about one-half the entire bulk. There ought not to be any spots or freckles of any kind on any part, nor the least sponginess or hollowness. If a White variety, the bleaching should be perfectly white; and if a Red, of a clear whitish-pink, shading off to white in the heart. Such is a first rate head of Celery; and I hope that more attention will begin to be paid at exhibitions to a better standard of excellence in vegetables, for there is yet much room for improvement.

PRUNING AND MANAGEMENT OF THE PEACH TREE.*

SECTION V. — THE PRACTICE OF PRUNING APPLIED TO THE PEACH TREE TRAINED IN THE SQUARE FORM.

I. *Formation of the Tree.*

146. It has been shown (55) how the young tree was planted. We will now return to that point, and examine the operations which it must each year undergo, in order that it may assume the square form of training, and be well filled up in all its parts, with an equal vigor throughout.

147. As stated (56), the young tree on being planted in autumn is cut back to eight or ten inches above the place where it was budded; see fig. 6, which represents the tree as it comes from the nursery — B is the bud, A is the point to which it is headed back when planted. In the following spring, the development commences of the eyes *a* and *b*, destined to originate the two main branches of the tree; and eyes situated lower than these, as *c*, are not destroyed till the two shoots from *a* and *b* are fairly started.

148. During the first year of planting, it is sufficient to superintend the growth of the two young shoots by training them loosely in the form of a somewhat open V. Their training is continued according to their growth, and so that the young shoots may take a perfectly straight direction. The first year's growth, except in case of accident, generally gives the results which are represented by fig. 7. At this stage, it is of importance to direct the young shoots by two perfectly straight rods.

149. If by any chance one of the young shoots should perish, the survivor must be trained upright, and pinched when ten or twelve inches in length, in order to form well-established eyes at its base, with the view of obtaining, in the following spring, two young shoots fit for commencing the two main branches.

* Continued from April number.

150. First Pruning.— *Second year of planting.* Fig. 7 represents the results of the first summer's growth. We begin by cutting off the piece c, closely to the angle formed by the two branches. This portion of stem has been retained till now, in order that its three young shoots, which have been pinched when necessary, might assist the two buds *a* and *b* (fig. 6) in drawing the sap. The latter have made the shoots A, A, (fig. 7,) of sufficient growth to allow of our pruning the two main branches to the proper length. This length is about fifteen or sixteen inches, measuring from the insertion of the branch. We must now examine the state of the two main branches, and endeavor to find two properly placed eyes at the above height. One of them, *a*, (fig. 7,) situated on the upper side, is intended to serve for the prolongation of the main branch; and the other, *b*, (in the same figure,) and situated on the lower side, to form the first lower secondary branch. The other main branch, A, is examined for two similar eyes at the same height, or nearly so. When that is done, each of the two main branches is pruned on the eye *a*, which becomes the terminal pushing one; and the eye *b* gives rise to the first lower secondary branch.

151. As the effect of the pruning on the eye *a* is to induce great activity of vegetation (65), the resulting shoot must be watched, and nailed at the proper time. The eye *b* must be equally watched, and nailed when necessary, training it by a rod in the right direction, endeavoring at the same time to keep its strength in proportion to that of the leading shoot of the main branch A. If necessary, superfluous shoots are removed at the disbudding, especially those at the front and back. The excessive growth of those that are overbearing is kept down by pinching; and lastly, we must endeavor to maintain a constant balance as regards length and thickness of shoots betwen the two wings. It is of importance not to concentrate the sap too much in young trees, but to leave it the necessary outlets. All regulating operations, such as pinching, should be conducted according to the state of growth of the tree, and should be performed to a greater extent when it is very vigorous.

152. If the balance is disturbed, it can be restored in several ways. The tree may be unnailed and re-nailed, so that the weakly wing may be more or less vertical, while the stronger one is lowered. This means, seconded by disbudding and pinching, is generally sufficient. But if it do not produce the desired effect, the weakly wing may be brought out from the wall, in order to give it still greater liberty (100). Nevertheless, that its branches may not take an improper direction, one or more props are placed behind them at six or eight inches from the wall. The wing is supported on these props so as to give it more air, which will greatly tend to strengthen it. It might be left perfectly free, if it were not for fear of the blasts of wind, which might break some of the branches, or bruise the bark and the green parts by shaking; it is therefore prudent to fix it as above. When the equilibrium is restored, the tree is renailed with regularity. The wing should not be brought forward from the wall except in fine weather, because, from its distance from the wall, it is deprived of the protection of the copings and screens, and would be more exposed to frosts. In pointing out this mode of restoring the balance between the two wings, a mode which can be employed for trees of any age, the necessity of giving a perfect regularity to the young

tree from the very commencement is insisted on; because it appears that when once the sap begins to distribute itself equally through the different parts of the tree, it continues to flow with greater regularity, and presents fewer difficulties to a fine formation.

153. There is another very simple mode, which, though not so efficacious, suffices in the majority of cases. It consists in placing a shading of straw mats, or boards, at eight to ten inches above the stronger wing. This privation of a certain amount of light and air is often sufficient to enable the weakly wing, which is left uncovered, to attain the same growth as the other. The influence that shading has on vegetation may be employed for full-grown trees, to restrain the growth of the upper secondary branches by retaining over their extremities the straw mats which are joined to the copings till after the fruit has been formed.

154. If these means fail, we must, at the following winter-pruning, leave the shoots on the weak parts as long as possible, and even, in some cases, not prune them at all, leaving both the terminal eye and all the young shoots, so that by their growth they may draw the sap towards the part. At the same time, the shoots on the strong part should be pruned short; all superfluous shoots should be removed at the first disbudding; and the progress of those remaining must be carefully watched, in order to allow them only a limited growth. This mode, which is very efficacious, is founded on the principal of physiology that leaves are the respiratory organs of plants, toward which the ascending sap is continually drawn, to be in them elaborated, after which it descends towards the roots. The ascent of the sap-fluid through the alburnum, and its descent by the vessels of the bark, maintain a more active degree of life in these parts, and thus their vigor is increased in proportion to the amount of the circulation of that fluid. This means may be employed on trees of any age; and it always succeeds well, provided the parts operated on be healthy, though of unequal strength; but it must not be used on badly-organized branches, or on those suffering from languor resulting from disease. In the latter case, we must begin by curing the disease.

155. There is another mode, which can only be employed on bearing-trees. It consists in leaving a great many Peaches on the strong parts, because the nourishment of the fruit being very exhausting, the vigor of the branches is diminished in proportion to the quantity of fruit they bear. On the other hand, the vigor of a feeble branch may be restored by limiting the number of its fruit. The latter proceeding is rarely used by the cultivators, because they must have Peaches, whatever be the consequence.

156. These means may be greatly assisted by disbudding, pinching, summer-pruning, and even by defoliation; and these operations may be employed separately or combined, according to the age and growth of the tree.

157. The results of the first year's growth are not always such as have been supposed. Often the vegetation is languid, and the shoots are neither so long, nor so thick, as to enable us to originate the first lower secondary branch. If such be the case, its formation must be deferred till the following year; and the two main branches are pruned to eyes properly situated for their prolongation. At the second

winter-pruning, whatever may be the length of their leading shoots, they must still be cut down to the stated height of fifteen inches and three quarters, each of them to two eyes chosen as aforesaid — one for the prolongation of the main branch, and the other for forming the first secondary branch. I have shown at *c* (fig. 7,) the point at which the pruning must be made in this case, which causes no other inconvenience than that of retarding the formation of the lower secondary branches for one year.

158. Second Pruning. — *Third year of Planting.* Fig. 8 represents the state of the tree after the second year's growth. The two main branches, A, A, have increased in length; so also have the two first secondary branches, B, B. All the shoots and laterals which have grown on the sides of these four branches are pruned to two or three eyes; then the main branch A is pruned at about thirty-one inches and a half from the insertion of the secondary branch B, after having ascertained that there are eyes properly situated at a like height on the other branch A, in order that a symmetry as perfect as possible may exist between the two wings of the tree. This interval of thirty-one inches and a half affords facility in nailing the fruit-branches formed along the secondary branches, and allows a free play of air and light. The main branches A and A are pruned at *c*, each on a wood-bud, *a*, situated on the upper side; and having a second eye, *b*, situated on the under side, which is to become the second lower secondary branch. If there should not be a wood-bud properly situated for a leader, there is no objection to choosing one in front; but then, when it pushes, and as it proceeds in growth, it must be nailed so as to make it gradually take the right direction, because it has a tendency to grow outward. The two branches B, B, are then both pruned to the same length, about thirty-one inches and a half, in order that, when the four arms are nailed, the points of the branches on each wing may nearly touch a perpendicular line supposed to be drawn from the base of the wall to the coping. This would be the case if the tree, represented by fig. 8, where the cuts on the leading branches are seen at *c c*, were nailed; because the ultimate depression of the main branches would make the two points on each wing nearly touch the same vertical line.

159. Very often in trees of this age the vigor is such that nearly all the eyes on the leading shoot break forth; so that, at the time of pruning, laterals only are found on the shoot, especially at the height to which it ought to be shortened. In such a case, choice is made of a lateral situated on the upper side, with another immediately below it on the under side; and after having cut the principal shoot, the two laterals are pruned each on a wood-bud suitable for prolonging them according to their respective destinations. They are then regulated by nailing. The pruning of the main and secondary branches may also be effected either on a latent eye followed by a lateral — that is, having a lateral immediately below — or on a lateral followed by a wood-bud, according as they are found at the point where the amputation should take place. Disbudding and pinching are still employed according as they are needed.

160. Third Pruning. — *Fourth year of planting.* The tree is unnailed, and shows the results of the third year's growth. I begin by examining the comparative state of each wing, so as to act accordingly. Supposing no unfavorable accident has occurred to the tree, I cut down all that are solely wood-shoots to two or three eyes, according

to their strength. All the fruit-branches that were pruned the preceding year are cut back to the lowest shoot, or to the successional nearest to the principal branch; and this successional is itself shortened to two or three eyes, according to its strength when it has no flowers; and when it has flowers it is pruned to the first wood-bud above the flower-buds. The laterals that it may be thought proper to preserve on the leading shoots of the principal branches must be pruned in the same way, and they are thus treated at every subsequent pruning. This done, we proceed to prune the three branches A, B, C, (fig. 11,) on each wing, commencing with the uppermost.

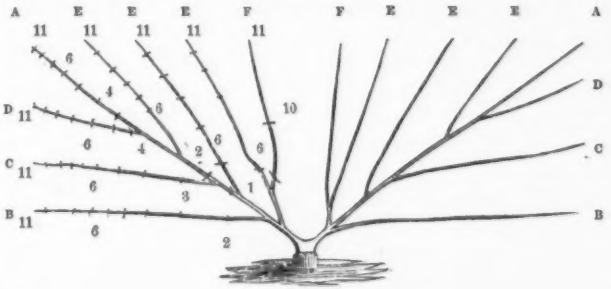


Fig. 11.

161. The two main branches, A, A, are pruned thirty-one inches and a half higher up than at the preceding pruning, and on an eye situated on the upper side, and which eye becomes the leading shoot. On the under side there must be an eye at the origin of D, which is intended to form the third lower secondary branch. After having thus operated on the two main branches, the two secondary ones, C and C, which must now undergo their first pruning, are next attended to. They are pruned at about thirty-one inches and a half from their base, on a bud situated as much as possible in front; the shoot from it afterwards receives its proper direction by nailing. The branches B and B are next pruned for the second time, and on a bud also placed in front, and thirty-one inches and a half higher up than the preceding pruning. It is necessary to remark, that, in order properly to constitute the lower secondary branches, they must be so pruned that their extremities exceed the perpendicular line supposed to be drawn where the end of the main branch touches when the latter is temporarily bent down with the hand. This excess of length should be greatest for the lowest secondary, and diminish to the highest. I should add, that, when a secondary branch is to be formed, it is always important to make the pruning, on the main branch, exactly at the proper point, where the eye immediately below it, which is to produce the secondary branch, may be placed at the proper distance for giving an equal space between the lower branches.

162. Immediately after the pruning is finished, the main branches are brought to a proper position, by bringing down each wing equally, so that the secondary branches may take a right direction. The requisite nailing of all branches is then completed.

163. As vegetation advances, the young shoots are successively nailed, commencing

at the upper part of the tree; for that part has always a tendency to make the strongest growth, and which tendency it is well to counteract by the greater or less amount of constraint that can be imposed by this operation. About the same time, the first disbudding takes place, and is followed by the pinching of all the over-luxuriant young shoots; and it is generally necessary, for the reasons above stated, to commence likewise these operations on the upper part of the tree. In short, we disbud when needful, and especially two of the shoots from triple buds on the upper sides of the branches; and all suppressions are made that the flow of the sap may render necessary for regulating and completing the intentions of the operations of winter-pruning.

164. Fourth Pruning.—*Fifth year of planting.* In our cultures at Montreuil, owing to the height the tree has attained, and the lowness of the walls, the formation of the lower secondary branches is now complete; but when the walls are high, a fourth lower secondary may be formed at this pruning, proceeding in the same way as for the other three which compose the frame-work of our trees. I will not treat further on this fourth branch, which seldom exists in our gardens, as I only wish to make known my own practice in conducting the square-trained Peach tree.

165. Fig. 11 (A, B, C, D,) represents the principal branches of the tree at this stage. After having examined, from top to bottom, the shoots and fruit-branches along the principal ones, and having pruned them as was done in the previous year, the pruning of the wood-branches is next to be considered.

166. The main branch, A, is brought down to the point it should occupy after nailing, in order to judge better where each secondary branch should extend. The branch A is now pruned for the fourth time, the branch D for the first time, the branch C for the second time, and the branch B for the third time; each of them to its proper relative height. As the formation of a secondary branch is no longer required, the branch A is pruned to a bud situated either on the upper or under side, or in front of the branch, according as it may happen to be at the most suitable distance.

167. Sometimes I do not find eyes on the principal branches sufficiently well placed at the winter-pruning. In that case I leave a portion of the shoot beyond the eye intended to produce the leading shoot, when that eye is situated lower down than the one on the corresponding branch, in order that after nailing no difference may be perceived. When the eye above which I have left this piece of branch begins to grow, I cut back to it, and I attend to the growth of the two relative extremities in order that they may become of equal length.

168. After having trained and winter-nailed the tree, lowering at the same time its four branches towards the position which they should finally occupy, vegetation soon commences; and during its course we must disbud, pinch, nail, disbud a second time, and use summer-pruning, according as these operations are required; performing all with the view to the equal distribution of sap. Particular care must be taken at the summer-pruning, to cut off all the snags, wherever they are found; because healing over is more readily effected at that than at any other period.

(*To be continued.*)

STRAWBERRIES.

During the Strawberry season last year our artist, Mr. Prestele, made us drawings of a large number of Strawberries, taking average-sized specimens from beds in a very ordinary state of cultivation. We present a few in our frontispiece this month.

Burr's New Pine, originated at Columbus, Ohio, several years ago, by Mr. Jno. Burr, is a pale red, conical berry, of fine flavor. The plant is hardy, and an abundant bearer. Around Rochester it is extensively cultivated for market. It has not proved so valuable in other localities. It is quite early — very little behind the *Large Early Scarlet*. Flowers pistillate.

Burr's Ohio Mammoth, originated also by Mr. Burr, of Columbus, is a very large, roundish, light-colored berry, of tolerably good flavor, but frequently hollow. Makes a fine show in the bed or in a dish, but the crop does not bear many successive pickings, and on the whole it can not be recommended for general cultivation. Flowers hermaphrodite.

Bicton Pine. — A new foreign variety. Large, roundish, pale flesh color, with a reddish tinge on the sunny side; fragrant, and tolerably high flavored. A moderate bearer; desirable in an amateur's collection on account of its color. It is the largest and finest white Strawberry we have yet tested. Flowers hermaphrodite.

Genesee. — Originated three or four years ago by Ellwanger & Barry — a cross between *Hovey's Seedling* and the old *Duke of Kent Scarlet*. A large, necked berry, of a bright crimson-scarlet. Fruit-stalks very strong, bearing the fruit well up. The plant is one of the most hardy and luxuriant of any we know, and produces large crops. About equal in quality to *Early Scarlet*. We consider this a valuable variety. Rather late, and remaining in use longer than many others. Flowers hermaphrodite.

Black Prince. — A foreign variety, we believe. Large, roundish, of a very dark, glossy red. Quite distinct. Very good when well ripened in dry weather, but insipid in showery weather, or if gathered too soon. The plant is hardy, and uniformly bears enormous crops with us. Mid-season. Very different opinions have been expressed in regard to this variety, owing in great part, we believe, to the different states of maturity in which it has been gathered, as well as to the weather at the time of ripening. Flowers pistillate.

Walker's Seedling, originated by Sam'l Walker, Esq., of Roxbury, Mass., is a medium-sized berry, regularly conical, and of a dark color, nearly as dark as *Black Prince*. The plant is tolerably hardy, and bears abundant crops. Flavor good. Flowers hermaphrodite.

Monroe Scarlet. — Another seedling, raised by Ellwanger & Barry. Medium to large size, roundish, light scarlet. Plant hardy, and an immense bearer. Flavor good. Has succeeded well in many localities. Flowers pistillate.

The Strawberry is so easily and quickly raised from seed, that new varieties are becoming numerous. The coming season we hope will enable us to test several which we regard with a good deal of interest. We hope those of our readers who have

opportunities of observation and comparison, will watch closely during the coming season, and give us the results; but we do not wish statements to be made regarding varieties unless their genuineness be unquestionable, for such information very often misleads the public.

THE GARDENS OF THE BIBLE.

BY A. D. G

MAN was placed, at his creation, in a garden. This garden — or "paradise," as in some parts of the Bible it is rendered, — was situated within another and larger domain called Eden. This whole region, as its name implies, was one of remarkable fertility and beauty. Its true site we are now unable to determine. The inhabitants of China, India, Ceylon, Persia, Syria, Ethiopia, and indeed of every quarter of the globe, have maintained, each for themselves, that the happy spot must have been within their respective countries. The Ceylonese, among others, point the traveler to ADAM'S peak, to the ruins of ADAM'S bridge and of ABEL'S tomb. Most learned critics, however, agree that it was situated in Armenia, between the sources of the four rivers, Tigris, Euphrates, Araxes, and Phasis.

But, whatever may have been its site, of this we are certain, that it was distinguished for the productiveness of its soil, and for the beauty of its climate and of its scenery. "Out of the ground made the LORD GOD to grow every tree that is pleasant to the sight, and good for food. * * * And a river went out of Eden to water the garden." Here our imaginations may have full scope to picture a scene of unmingled comfort and of perfect enchantment. The CREATOR planted this garden. What a paradise, then, it must have been! GOD laid himself out (be it reverently said) to store it with everything that could contribute to man's highest enjoyment. What were the trees and plants of which the happy pair ate? Perhaps the Fig, the Orange, the Pear, the Peach, and the Vine, were among the number. What were the trees upon whose majesty or grace they looked, and under whose shade they reclined? Perhaps the Palm, the Oak, the Magnolia, the Cypress, the Cedar, the Pine, and Fir. Every breeze bore to them the fragrance of flowers, the songs of birds, and the murmur of running streams.

"Out of the fertile ground [GOD] caused to grow
All trees of noblest kind for sight, smell, taste;
* * * * * *
* * * the crisped brooks,
Rolling an orient pearl and sands of gold,
With mazy error under pendent shades
Ran nectar, visiting each plant, and fed
Flowers worthy of Paradise, which not nice Art
In beds and curious knots, but Nature boon

Pour'd forth profuse on hill and dale and plain,
* * * * * *
Groves whose rich trees wept odorous gums and balm,
Others whose fruit burnish'd with golden rind,
Hung amiable, Hesperian fables true,
If true, here only, and of delicious taste:
Betwixt them lawns, or level downs, and flocks
Grazing the tender herb, were interspers'd,
Or palmy hillock; or the flowery lap
Of some irriguous valley spread her store,
Flowers of all hue, and without thorn the Rose."

Among the trees of this garden was "the tree of life," and "the tree of the knowledge of good and evil." Of the first, in addition to its spiritual import, it is supposed that it was an evergreen tree, flourishing continually with leaves and fruit. It grew nowhere except within the garden; for it is mentioned as a reason for man's expulsion therefrom, "lest he should put forth his hand and take of the tree of life." Of the second, we know only that it was appointed to serve as a test of man's obedience. In this garden man was placed, "to dress and to keep it" — that is, to cultivate and to beautify it still further. A high trust and privilege, surely, it was to have charge of such a paradise! How long ADAM held possession of this happy abode, we do not know. How long the trees waved in their glory, and the flowers diffused their fragrance, and the soil yielded its return to man's easy labor; how long before the thorn and thistle were seen shooting up from the ground, and frost and blight and untimely storms and burning suns turned that garden into a desert, we are entirely ignorant: but that such a time came, and all too soon, we have abundant evidence.

The Bible contains but few special notices of the gardening of the Hebrews, or of other contemporaneous nations. In the early ages of the world, when men seem to have led a somewhat migratory life, little was done in the way of tilling the soil beyond what was necessary for the immediate wants of the inhabitants; and in the climate of Eastern Asia, abounding in so many spontaneous fruits, but little labor was required. When, however, men became established in permanent homes, — as, for example, the Jews in Canaan, — they at once began to cultivate their fields and to plant gardens with much care.

JACOB had a garden in Hebron, from which at one time his sons gathered "a little balm, and a little honey, spices and myrrh, nuts and almonds," as a present for the Governor of Egypt. SOLOMON had a garden in Jerusalem. It was situated on the eastern side of the city, just without the walls, between Mount Zion and the brook Cedron. Of its size we have no certain knowledge, though, if we may judge from the number of trees and plants grown within it, it must have been large. It was square, and surrounded by a high wall. Its proprietor was quite a botanist, for his time; and, having immense wealth at his command, stocked his grounds with things rare and beautiful, as well as with those that were simply useful. There was "the Hyssop* which springeth out of the wall;" "odoriferous and showy flowers, as the Rose, the

* Supposed by many to have been a species of moss.

Lily of the Valley, the Calamus, Camphor, Spikenard, Saffron, and Cinnamon; timber-trees, as the Cedar, the Pine, and the Fir; and the richest fruits, as the Fig, Grape, Apple, Palm,* and Pomegranate."—*Loudon.* It was also watered by wells and running streams. NABOTH had a vineyard in Samaria, adjoining the palace of AHAB. He must have been a very good gardener, or his king a very covetous man; for it appears that his purple clusters looked so tempting, from AHAB'S windows, that the king could not restrain his desire to get possession of them. AHASUERUS had a garden near his palace at Jerusalem, whither he often went to refresh himself; but of its size or products we know nothing.

It is evident that the garden among the Hebrews, as throughout all the East, was a place of more frequent resort than it is with us. It was fitted up with arbors embowered in vines, and with aviaries and seraglios (or tasteful cottages); and streams of water were conducted through it, both for use and beauty. It was resorted to less for exercise than for rest and enjoyment; the climate of that country rendering desirable a place for repose, a quiet spot sheltered from the sun by broad-leaved trees and clustering branches, amid which to breathe the fresh air, to view the landscape, to hear the song of birds and the sound of running water. The Bible is the only book from which we can learn how the Hebrew managed his farm and garden; and the information from this source is somewhat scanty. This, however, we know, that in his fields he grew Wheat, Rye, Barley, Millet, Vetches, Lentils and Beans; and in his garden he raised Cucumbers, Melons, Almonds, Pomegranates, Olives, Figs, Grapes, Gourds, Onions, Garlic, Anise, Cummin, Coriander, Mustard, and various Spices; to which may be added many flowers, whose names the Bible does not record. He raised in his garden what his climate especially required for his comfort and health—juicy, cooling fruits, to assuage his thirst; spices and fragrant herbs, to regale him with pleasant odors; and wine, to refresh his spirits.

Before leaving this part of the subject, it may be worthy of remark, as showing the horticultural knowledge of MOSES, that he forbade the Hebrew to ripen any fruit on the Vine and Olive for the first three years after they were planted, so as to enable them to become mature and thrifty.

When the sacred writers would speak of a state or condition of the Jewish people much to be desired, they often represent it by such figures as, "Sitting every man under his own vine and fig-tree, with none to molest or make afraid," &c.; thus indicating, it would seem, that in the mind of a Hebrew the peaceful ownership of a garden was among the highest of earthly felicities. And in ABRAHAM'S purchase of "the field of Ephron, with the cave, and all the trees that were in the field," and in the frequent burials amid groves of Oak, mentioned in the Bible, may we not see how

* The more careful writers of the present day hold that the Rose of modern gardens is not once referred to in the Scriptures, though it is not doubted that it was well known in the earliest ages of the world, and had a place in every garden of the Bible. The Lily of the Valley was not the humble plant which appears in our borders, but a large flower growing wild in Palestine, especially in valleys. The "Lilies of the field," between which and SOLOMON'S attire CHRIST drew a comparison, was, it is supposed, a red Lily; and, as the royal robe was purple, such comparison was beautifully appropriate. The fruit referred to in the Bible under the name of the Apple, is now commonly supposed to have been the Citron.

greatly the Hebrew delighted in trees as a protection and shade for his last resting-place?

But, leaving the gardens of the Old Testament, let us pass to those of the New. The garden of GETHSEMANE was a grove in the outskirts of the village of Gethsemane, on the western slope of the Mount of Olives. It was a pleasant retreat from the noise and heat of the neighboring city, Jerusalem; and here our SAVIOR frequently resorted with his disciples. Amid these shades he suffered great agony of mind, on the eve of his crucifixion; here an angel descended to comfort him; and here he was betrayed. History informs us that TITUS cut down all the trees in the neighborhood of Jerusalem, including those in Gethsemane; but the Olive and some others sprang up again, and trees of this description have continued to thrive until the present day, in this their ancient locality.

Our SAVIOR was buried in a garden, in the suburbs of Jerusalem. The city was surrounded with pleasure-grounds of various kinds; and as the soil was much broken with huge masses of projecting rock, the Jews often turned them to good account by cutting family vaults in them. It was in one of these tombs, which JOSEPH of Arimathea had prepared for himself, in his own garden, that CHRIST was interred. The funeral took place just before sunset of Saturday, early in April, just as all nature was reviving after the sleep of winter.

The future state of the righteous is often spoken of in Scripture under the figure of a garden. It is three times called a "paradise." It is also represented as a place of rest, where the inhabitants shall be shielded from the oppressive light and heat of the sun, and be refreshed by living fountains of water. And as though Eden were again restored, we are shown "a pure river of water of life, clear as crystal, proceeding out of the throne of GOD and of the LAMB; and on either side of the river, is the tree of life, bearing twelve manner of fruits, and yielding her fruit every month, and the leaves of the tree are for the healing of the nations."

Such are some of the gardens referred to in the Bible. In his primitive state, man's home was a garden. And in all his subsequent history, the peaceful culture of the soil has contributed largely to his happiness, being "the inclination of kings and the choice of philosophers," as well as of those in humbler walks of life. In a garden the SAVIOR instructed his disciples, and there he was betrayed; in a garden he made his tomb; and in a garden fairer than that of Eden, whose fruits and flowers shall never fail, and whose leaves shall be always green, the good shall be gathered at last, and remain forever more.

Foreign Notices.

PRUNING ROSES.—The introduction of a wood-cut of a closely-pruned Rose in last year's Almanac, induced some subscribers to ask for more information which it seemed to foreshadow; we therefore present the following general instructions. It is, however, hoped that the practical ideas will be of such assistance to the amateur, as to prevent the all-but fatal operations generally performed under the above title; neither can an attempt be made to particularize the treatment necessary for the several families; their growth, to which our subject alone refers, will be readily comprehended by the terms luxuriant or short growing, and tender. Budded Roses when received from the Nursery are generally one year old, and during the first season the knife must be sparingly used; but after all chance of severe frost has disappeared (early in April,) the branches should be cut back to four or five eyes, having previously cut out all growth that interferes with the shape the sketches illustrate, being especially careful in performing the former operation, *to cut to an outer bud.* The following illustration (fig. 1,) of a budded Hybrid Perpetual, when received from the Nursery, shows, by the marks, where the knife is to be used; and further to exemplify the great advantage of adhering to this principle, the next sketch (fig. 2,) shows the results, after the first pruning, where it has been attended to and where neglected; the single lines showing the former, and the dotted the latter.

Fig. 1.

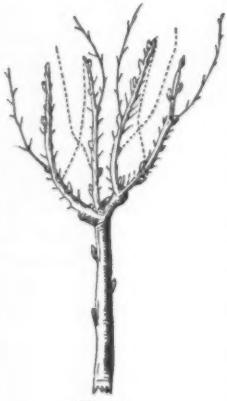


Fig. 2.

During the following October, any shoots which started in the center of the head, or any cross branches, may be entirely removed; but the shortening the branches leave till April, as the bud to which the branch is cut may be destroyed by frost, &c.; this would necessarily produce the very growth these directions, when attended to, will prevent.

With erect-growing varieties, as *Mrs. Elliott* (H. P.,) *Madle. Armé*, &c., the shape of the plants, when young, may be often much improved by ligatures, training the branches into a more outward direction.

In shortening the shoots of the majority of Hybrid Perpetuals, four or five eyes should be left; but when of luxuriant growth, as *Louis Bonaparte*, &c., shorten the branches to about half their length, and with the more robust summer-blooming varieties, take off about one-third only, keeping the center of the head well-thinned; any thing like short pruning, with such subjects, being productive of abundant wood and scanty blossoms.

In the short-growing Hybrid Perpetuals and Bourbons two or three eyes are sufficient to be left; in the tender Tea-scented and Chinas, all weakly growth should be removed, and the shortening the branches must be performed with care; and, as in several varieties the eyes are far apart (recollecting the previous directions,) the amateur must use his own discretion.

Dwarf, Moss, and Provence Roses can scarcely be pruned too severely · the Persian Yellow,

and the other Austrian Briers too slightly, as not more than about an inch of the point of the shoots must be removed, as these varieties bloom only on wood of one year old.

Before concluding, it may be remarked that summer-pruning is often desirable, and frequently saves much trouble. This may be effected to a great extent by cutting the blossoms for ornament, or when decaying; and several varieties, such as Hybrid Perpetuals *William Jesse, Duchess of Sutherland*, &c., will, by reducing a moiety of their branches to one half their length in July, be much more certain to give autumnal blossoms; besides which, much unseemly growth may be easily checked when in a young state; and it may be, in conclusion, remarked, that the form it is most essential budded Roses should assume is that of an expanded inverted umbrella, which insures the perfect ripening of the wood, and consequent certainty of bloom. Supposing these operations are to be performed on wood one year old, the pruning scissors and a knife are all the tools required; where older wood is to be removed, a double-toothed *key-hole* saw will be requisite, not neglecting to make clean cuts with the knife after wounds made by either of the other instruments. — *Edwards' National Almanac, England.*

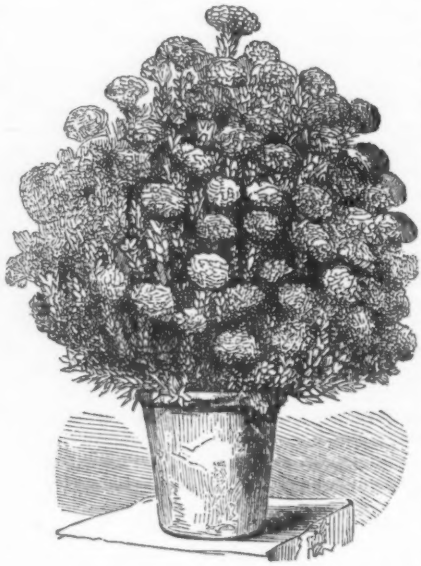
The Genus Kalosanthes. — Some of the species of this genus are among the most showy and fragrant of summer-flowering plants, and they deserve to be more generally cultivated than they have hitherto been. The magnificent specimens annually produced at the great metropolitan exhibitions in July indicate the capabilities of the genus, and good plants are frequently produced far from the scene of these meetings. I doubt, however, whether any genus equally deserving attention is so commonly neglected or mismanaged by country gardeners as this. With a little care the flowers remain in perfection for some six or eight weeks, and the plants will be found exceedingly useful in the show-house, to take the place of the Azalea when the beauty of the latter is over.

Young plants intended for specimens should be dwarf and bushy, with strong well-ripened wood; those that may have been wintered in a soft, half-growing state, should be rejected, as it is difficult to get them to break freely or grow vigorously. Place them early in March in a mild, growing temperature, of from about 45° at night to 60° with sunshine. The shoots must be stopped or cut back, as may be necessary to insure a compact, bushy growth; and young branches will be produced much more freely, if two or three pairs of leaves are removed from the points of the shoots; and this should always accompany stopping. If the roots are abundant and active, shift into pots two sizes larger than those the plants are in; but first see that the ball is properly moist, and be careful to have the soil to be used in the same condition. Nothing is more likely to cause failure than neglect of this. The side-shoots should be tied out, keeping them near the surface of the soil. Keep the atmosphere rather close and moist, and water carefully till the roots start into the fresh soil. When the plants have broken, and are fairly started, the temperature may be increased to about 55° at night, and from 65° to 75° with sunshine. This high temperature must not, however, be maintained without a free circulation of air; for the Kalosanthes, like most Cape plants, very much dislikes a stagnant atmosphere, and it requires all the light which can possibly be afforded it: therefore admit air freely, and keep the plants near the glass.

In May, or as early as warm weather sets in, they may be removed to a cold frame, where, with a little care, they can be kept sufficiently warm, and where the conditions most conducive to vigorous growth will be readily supplied. Air should be freely admitted whenever the state of the external temperature will permit. Although a stagnant humid atmosphere is injurious, with a circulation of air it can not be kept too moist. If they stand on a bed of coal ashes, this should be watered on the mornings of bright days, and the plants sprinkled over head towards evening, leaving a little air on during night, and a thin shade should be thrown over the glass during the forenoons of bright days, but use this sparingly. A liberal supply of water will be necessary while the plants are in active growth, but give them no more than is requisite to keep the soil in a healthy moist state; and when the pots are moderately well filled with roots, manure-water in a clear weak state may be used with advantage two or three times a week.

The treatment of the plants after midsummer must be regulated by the size of the specimens

desired. To produce large flowering plants, such as that represented in the accompanying wood-cut, it will be nececsary to grow them two seasons, and in this case they should be stopped and potted early in June, as they may have filled their pots with roots. Have an eye to the formation of compact dwarf specimens, and stop and cut back as freely as may be necessary to secure this; for they break freely, and there is no danger of injuring them by stopping or cutting back. If plants to produce about a dozen heads of bloom each are all that is wanted, with good management this may be secured by one season's growth; but if large specimens are desired, it will be necessary to grow them two seasons. Plants intended to flower the following spring should receive a rather large shift at the beginning of the season, and must neither be stopped nor potted after the end of June. It is easier to produce large handsome specimens of Kalosanthes than to have well-flowered plants; and unless the wood is thoroughly ripened previous to winter, it will be useless to expect a fine display of blossom. The necessary maturation of the wood can be effected only by subjecting the plants to full exposure to air and sunshine, and keeping the soil in a rather dry state. This change of treatment must be introduced very gradually; but if a fair amount of flower is expected, the plants should be inured to it by the middle, or at latest the end of August.



Those that were repotted may be treated less hard during autumn; but care must be used to get the wood of these well ripened before winter. If they can be placed near the glass in a house where Grapes are preserved during winter, they will be suited perfectly; and as they require very little water at the root, they will be less injurious there than most plants.

The best situation for the flowering plants during spring is the front shelf in the greenhouse. They should be kept freely exposed to air and sun; and after the appearance of the flowers, the atmosphere can hardly be kept too dry. A moist stimulating atmosphere promotes growth; and the effect of this would be an unsightly lengthening of the stems, an occurrence by far too common. When the flowers assume their proper colors, remove them where they can be kept dry, cool, and shaded from the sun.

Plants intended for large specimens should be stopped and potted in March, and treated as already recommended for specimens intended to flower the following spring.

Propagation is easily effected. I generally select firm young shoots with several branches, and plant them in 4-inch pots in sandy peat, placing them in a close pit, carefully shading them till rooted, which will be in about a month. As regards soil, this should be light but rich; half turfy sandy loam and half fibry peat, with a liberal allowance of sharp silver-sand and small potsherds, broken bones, or charcoal, will be found a suitable compost. Strong tenacious loam had better be avoided, or at least used very sparingly. The peat and loam should be broken up into pieces about the size of a nut, and intimately mixed with the sand, &c., previous to use. Secure perfect drainage by placing plenty of potsherds, properly arranged, in the bottom of the pots, covering with some rough fibry pieces of peat, so as to prevent the soil being washed down among them.—*J. B., in Florist, London.*

Editor's Table.

THE AMERICAN POMOLOGICAL SOCIETY.—We desire to call the particular attention of nurserymen and fruit growers to the following circular, issued by President WILDER on the 1st of April. The meeting, it will be seen, is to be held simultaneously with the annual autumn exhibition of the Massachusetts Society. This strikes us an excellent arrangement, not only because the time (13th to 19th of September,) is a convenient one to a large majority of those who will be likely to attend, but because it will afford them an opportunity, without consuming extra time, to witness the magnificent display which the Massachusetts Society never fails to make on these occasions.

No city in the United States offers so many attractions to persons interested in Pomology and other branches of horticulture, as Boston. There we find every department—fruit culture, floriculture, the construction of dwellings, and the embellishment of gardens, all in the highest and most perfect condition to which they have yet attained on this continent. There we find genuine gardening taste and skill and enthusiasm, such as we cannot find elsewhere. There will be an immense meeting at Boston, both on account of the attractions to which we have alluded, and of the deep and general interest taken in the subject in all parts of the country.

During the two years last past, the number of persons interested and actually engaged in fruit culture in this country must have been more than doubled, we think, and information is greatly needed and no less keenly sought for. We trust that practical, observing men, in all parts of the country, will aid in promoting the objects of the Society, as set forth in this circular. No time is now to be lost in making notes for the season, and collecting such information as committees will be expected to furnish. We shall publish a complete list of the State committees as soon as we can learn their names.

In this connection we must also call attention to some excellent suggestions in the communication of an esteemed correspondent, which will be found on another page. The results of such meetings depend very much upon the manner in which the proceedings are conducted, whether they be satisfactory or not. The men who will attend them are generally working men, who can but ill afford to be away from home, and as a matter of course they desire not to lose time in profitless remarks or discussions, but that every moment be turned to the best possible account.

"AMERICAN POMOLOGICAL SOCIETY.—The Fifth Session of this National Association, will be held at Horticultural Hall, in the city of Boston, Massachusetts, commencing on Wednesday, the 13th day of September next, at ten o'clock, A. M.

It is intended to make this assemblage one of the most interesting that has ever been held in this country, on the subject of Pomology. All Horticultural, Agricultural, and other kindred Associations, of North America, are therefore requested to send such number of delegates to this Convention, as they may deem expedient.

Pomologists, nurserymen, and all others interested in the cultivation of good fruit, are also invited to attend the coming session.

Among the objects of this Society, are the following:—

To ascertain from practical experience, the relative value of varieties in different parts of our

widely extended country. To hear the Reports of the various State Fruit Committees, and from a comparison of results, to learn what fruits are adapted to general cultivation; what varieties are suitable for particular localities; what new varieties give promise of being worthy of dissemination; and especially, what varieties are generally inferior or worthless, in all parts of the Union.

It order to facilitate these objects, and to collect and diffuse a knowledge of researches and discoveries in the science of Pomology, members and delegates are requested to contribute specimens of the fruits of their respective districts; also papers descriptive of their art of cultivation; of diseases and insects injurious to vegetation; of remedies for the same, and whatever may add to the interest and utility of the Association.

The Massachusetts Horticultural Society has generously offered to provide accommodations for the Society, and also to publish its proceedings free of expense.

All packages of fruit intended for exhibition, may therefore be addressed as follows—'For the American Pomological Society, Horticultural Hall, School Street, Boston, Mass.;' where a Committee will be in attendance to take charge of the same.

All Societies to be represented, will please forward certificates of their several delegations, to the President of the American Pomological Society, at Boston.

MARSHALL P. WILDER, *President.*

H. W. S. Cleveland, *Secretary.*"

A Rose-Garden under Glass.—The most luxuriant growth of Roses we have seen in a long time, was in the houses of Messrs. Ryan & Co., where the plants are set out in borders as in the garden. Hybrid Perpetuals and Bourbons are growing up into miniature trees, and producing immense clusters of large flowers—so different from the plants cramped up in pots, as to seem not to belong to the same family. Whoever would enjoy a Rose-garden in April, in our northern climate, should take a hint from this. A Rose-house of this kind might be so constructed as to require little, if any, artificial heat during winter.

Seedling Camellias.—Mr. R. Robinson Scott has sent us a box of Camellia flowers from seedlings raised by the late J. B. Smith, of Philadelphia, and now held by Mr. Dan'l Boll, of New York. The flowers were much withered and discolored, so that no accurate opinion of their merits could be formed. There appears to be ten varieties, several of them very distinctly striped. One is a very dark purplish crimson, with well defined light stripes; and one a very pale flesh color, nearly white, with deep rosy stripes. All, with one exception, are well formed. We should be glad to see them in a more perfect state.

The Season.—Up to this time, April 25th, the spring over a great portion of the country has been remarkably cold and backward. The 22d was the first really spring-like day we have had in this region since the 15th of March. Bulbous roots and border plants that were uncovered early have suffered much, but the fruit buds are safe, and promise at this moment an abundant crop. In many places north and west we learn that all hopes of a crop are gone.

Another New Book Destroyed by Fire.—A new work on Rural Architecture, by Gervase Wheeler, Esq., the author of "*Rural Homes*," was destroyed by a late fire in New York, just as it was ready for the press. The loss is a serious one, not only to the author, who had spent much time in its preparation, but to the public. We are happy to learn, however, that he has gone to work anew, and we hope soon to have the pleasure of announcing its appearance.

New and Rare Plants.—Heintzia tigrina. Nat. Ord. *Gesneriaceæ*—This desirable gesneriaceous plant is figured and described by Dr. Planchon, in the 7th volume of the *Flore des Serres*. As this tribe of plants is, generally speaking, well suited to our conservatories, and many of the species of Gesneria already introduced have been found valuable additions to the hot-house, easy of cultivation, and propagated with facility from the leaves, we have translated the following description of this showy plant:—

"*Heintzia tigrina* was found by M. Karsten, in the shady mountain forest of Caracas, at 5000 feet above the level of the sea. It forms an under shrub, (*sous arbuste*) with spreading branches, from four to five feet high, slightly quadrangular, ornamented with fascicles of flowers, enclosed in a rose-colored calyx, which proceed from the axils of the large leaves. The corolla is beautifully dotted with purple on a white ground. Though resembling Alloplectus in appearance, as well as in the calyx and fruit, this genus is distinguished at once from that family, as well as from all analogous genera, by the absence of a large hypogynous gland on the posterior side of the base of the ovary. Its habit, calyx, and form of corolla, separate it from Drymonia, the only genus of the order with a free ovary, which, as well as the Heintzia, has no trace of a fifth stamen. It flourishes and ripens its seed in a humid and warm atmosphere, flowering in the summer months, and ripening its seeds in the comparatively dry season which forms the winter of that region."

We have been obliged to abridge the interesting details furnished by the editor of the *Flore*.

Aquilegia glandulosa. Nat. Ord. *Ranunculaceæ*—This newly introduced perennial herbaceous plant is one of the most attractive of its class. The outer petals are of a bright blue color, and the appendages white, very delicate and showy. It is quite a new form of Aquilegia, and a decided acquisition. We observed it in bloom in the greenhouse of H. A. Graef, Brooklyn, L. I., who was the first, we believe, to introduce it to this part of the country. All who admire choice herbaceous plants will be pleased with it. It will prove easy of cultivation, as are all the species of this old and well known family, so familiar by including the Columbine, a favorite garden flower.

Agriculture and Horticulture in California.—We have received the third number of the *California Farmer*, published at San Francisco, California. From this number we glean several interesting items.

The Committee on Agriculture have introduced a bill into the Legislature to establish a State Agricultural College; and also to aid the State Agricultural Society. California is getting the start of many of the old States.

The Californians laugh at the reports of large crops to be found in the agricultural papers here. After giving the premiums of the New Hampshire State Society, at which a premium was awarded for 30 bushels of wheat to the acre, and 50¼ bushels of barley, the *California Farmer* asks: "What would California Farmers say to 30 bushels wheat to the acre? and what would New Hampshire farmers say to our crops of 150 bushels barley to the acre?"

This seems rather impertinent for so young a member of the family; but when we look at their reports of enormous crops, and vegetables of such a size as to make the statement seem almost fabulous, there is some excuse for the contempt with which Californians look upon *our* reports. We copy a few items from the Report of the Committee of an Agricultural Exhibition at San Francisco:—

"From Dr. Sam'l Murdock, San Jose, Mission land—Seven sacks potatoes, 12 bushels, the product of three potatoes.

Ray & Jackson, San Francisco—One large and splendid beet, 36¼ pounds.

From JOHN SUYDAM, American River, Sacramento—Three sugar beets, 19, 16, 14 pounds; one blood beet; two fine Russian turnips. The beets were planted June 10, harvested Oct. 3d.

From G. T. PIERCE, San Francisco—One potato, raised in Pajaro Valley, weighing 5½ pounds.

From S. BRYANT HILL, Pajaro Valley—Three onions, weighing 9 pounds, one measuring two feet in circumference.

From J. M. HORNER, San Jose—Four fine squashes, 87, 70, 61, 35 pounds; one drumhead cabbage, 25 pounds; five cabbages, of five varieties; two specimens potatoes, 3½ pounds each.

Col. J. T. HALL, Sacramento—One blood beet, of surpassing size, weighing when lifted from the ground 65 pounds, and when cleared of leaves and on exhibition 52 pounds, after it had been out of ground some time."

The Committee say, in their report, "It would be difficult to make persons in the old States realize what was actually exhibited in the Hall. They must have been seen to have been believed."

THE Greenhouses of the Messrs. DONELLAN, of Hanford's Landing, were totally destroyed by fire a few weeks ago; and all their hot-bed sashes, and implements in an adjoining building, were also destroyed. We sympathize with those worthy gentlemen in their misfortune. They will re-build immediately.

SUGGESTIONS FOR THE NEXT MEETING OF THE AMERICAN POMOLOGICAL SOCIETY.—The next meeting of the American Pomological Society is to be held at Boston, in the autumn of the present year. It is desirable that all who have the objects of the Society at heart, should remember it in time, and endeavor to collect and arrange all the information in their power during the coming season. Past experience should teach the means of more efficient future action; and that it may do so, it will be well to recur to the proceedings of former sessions, not for the mere sake of finding fault, but to learn how to avoid faults hereafter. The importance of the subject is sufficiently evinced by the fact that its discussion has called together, on every occasion, so large and intelligent a body of men from every section of the Union, as well as the British Provinces. The labor and cost of these assemblies have fallen heavily upon the members, but no shirking or shrinking have ensued. No similar body of men will ever assemble with a readier will to work; and it will be much easier for their successors to carry out their plans, than it was for them to collect and digest the materials of which those plans are the result. The machine is made and put together, and started. Henceforth it needs only to be kept oiled and free from clogs.

The greatest bar to efficient action heretofore, has been the want of such system as would prevent loss of time. When two or three hundred men assemble for a specific purpose, at intervals of two years, many of them performing long journeys for the purpose, and then devote only two or three days to the work they have to do, it is obvious that time is the most precious commodity they have to deal with. The five minute glass should occupy a conspicuous position on the speaker's desk; and, to be justly emblematic, its sands should be of gold. So far as material arrangement is concerned, nothing could be better than was provided at the last meeting. Every convenience for the exhibition of the fruit, the comfort of the members, and the accommodation of the committees was provided by the Pennsylvania Horticultural Society. Some of the contributors, however, were guilty of a provoking omission in neglecting to label their fruits. Every one who sends fruit should have a list to give to the Secretary, and a label for every specimen prepared before hand. But the great loss of time has been occasioned by the number of unnecessary words. This has not been an intentional fault. Considering what have been the occupations and habits of most of the members, it is rather surprising that the general style of speaking should have been so good, and so much to the point as it was; and there were many striking illustrations of the fact that good common sense, even under a rough

exterior, is worth more than a polished style without a basis of sound judgment. But every one will acknowledge the fact that a great deal was said which was of no use or interest; and it is not surprising that those who appreciate the importance of the work, should be somewhat restive under an infliction of dullness, whose background is not even relieved by the comfortable prospect of eight dollars a day, but which, on the contrary, must be paid for out of their own pockets.

The "order of business," according to the bye laws adopted at the last meeting, is as follows:

1. Credentials of Delegates Presented.
2. Address of the President.
3. Election of Officers.
4. Reports of State Fruit Committees
5. New Business.

The performance of the three first named duties, with the arrangement of the fruit for exhibition, will be as much as can reasonably be hoped for the first day. The second day would therefore begin with Reports of State Fruit Committees. These reports are exceedingly interesting documents for study or reference, but are too long to be read to the meeting, and have heretofore been passed to the Secretary, to be published in the record of proceedings. Next comes "New Business," which means anything connected with horticultural matters which any member chooses to bring forward, and consists generally of discussions of the characteristics of different fruits. This, therefore, is the most interesting and practically useful part of the proceedings—the part in which every speaker should be most concise and directly to the point—the object being simply to elicit facts. It so happens, however, that many of the most thoroughly practical men, who possess the richest store of facts, are the ones who are most diffident, and have least fluency of speech. It were to be wished that every one would remember that the assembly at such times is simply a court, before which they are only witnesses for or against the character of the fruit under discussion. If they know anything bearing upon the case, which is not already sufficiently proved, let them say it in as few words as possible; if they know nothing, let them be silent. If, however, every member would bear in mind, during the coming summer, that he is to appear as a witness next autumn, and would take pains to note down, at the time, every item of evidence which falls under his observation, and have his notes at hand for reference when the subjects come up, it would greatly facilitate business and give much more force to the final decision, than if each one depended on memory alone. It is to be hoped that this plan will be generally adopted.

Nothing would be of more essential value than accounts of carefully conducted experiments, tending to elucidate new facts or decide disputed points. But the fact is, there are few men who are capable; or, if capable, who have the time and opportunity for conducting horticultural experiments in such a manner as to arrive at conclusive, or even very reliable results. So many elements are involved, and these elements are subject to such an infinite variety of changes, that it requires keen observation, sound judgment, and untiring patience, to carry out any really important experiment in culture. It is not to be done in one year, and may require the coäction of several parties. Unless it is thoroughly performed, it is worse than useless; for it may lead to wrong conclusions, and, enlisting party spirit on its side, bar the passage to correct investigation. If any one doubts either of the above assertions, let him begin the perusal of all that has been written on the "Strawberry question," and report his opinion after he is through. Still, it is to this source that we must look for the most valuable results; and the Pomological Society could in no way more effectually advance its objects, than by instituting a series of experiments, to be conducted at different points, under the superintendence of Committees, who should report at the biennial meetings. The results of such experiments would have much more weight than those arrived at by an individual; but it is doubtful whether the Society is yet in condition to undertake them, and meantime every individual report is of value.

At the former meetings of the Society, it has been customary at the outset to appoint a Committee to examine and report upon new fruits—a most important duty, and one which has called for the services of the best horticulturists, whose names may be found on the lists of that Committee. The effect has been to banish those men to a side room on several occasions when their voices and votes would have been most valuable in the general assembly. This is an evil which might be remedied; and it is for those who take the lead to think of such things, and make such arrangements as will prevent their repetition.

So far as can be judged from present appearances, the coming season will furnish abundant means for collecting such information as will make the next meeting an exceedingly interesting one. The horticultural journals ought, therefore, to "keep it before the people," and every one should exert himself to the utmost to contribute to the fund which is for mutual benefit.

An Officer.

The Season has been, and still is, a trying one for fruit trees. December, up to the 20th, was mild. Winter then set in with cold and snow, and from that time to March 1, every week possessed the peculiar phases incident to one part of extreme cold and another part thawy. The changes were frequent and severe, the mercury sometimes sinking 40° in twenty-four hours. The effect on Peach and other delicate buds can not be mistaken. From March 7th to the 17th, there was every appearance of the coming of spring; the temperature was so mild that the snow was gone, except in cold localities, the frost nearly out, and in many places the ground getting dry; birds were singing in joyous melody, frogs commenced the serenading of spring, wild geese and pigeons passed by to the north. On the night of the 17th the wind changed suddenly from S. W. to N. W., and the howling set up by old Boreas was of any but an amusing or agreeable character. His cold breath, as it fell upon the earth, undid all that the previous warm days had accomplished; and he blew so furious a blast through the 18th, that there was no sign of thawing that day. The wind was not so high in this vicinity, however, as at many places east and west of us, and but very trifling apparent damage was done. The morning of the 19th, the mercury stood at 6°, and a cold day followed. Indeed, the weather has been severe to the present time. Had the same clouds floated through the atmosphere, and the same winds raged in their fury during the short days of December, that month would have been memorable for its severity. Now, the latter half of March must claim supremacy as affording an atmosphere the most revolting to man and beast of any time of the same number of days of the past winter. How far this out-of-place severity will extend into spring, is yet to be known; but we hope the north wind has labored so long and strongly for the last ten days, his breath is nearly spent, and that his icy reign will be followed by more gentle but enduring breezes from the warm southwest. W. Bacon.—*Elmwood, Richmond, Mass., March* 28.

Seedling Apples.—I inclose you a small sample of a dried Apple, which you will see is quite remarkable for its whiteness. [Almost as white as snow.—Ed.] I received it from Mr. L. Norris, of Windsor, Ohio, who assures me it was dried in the usual way. It is the product of a seedling Apple which is remarkable for this peculiarity—of retaining almost a snowy whiteness when dried. It cooks tender, and altogether must be a very desirable variety for this purpose, as it is also quite a good eating Apple. I have thought it worthy of a notice in your journal, and therefore copy Mr. Norris' remarks upon it in his letter covering the scions which he very kindly sent me. He names it *White Beauty*, and adds:—"It is a native of the Township of Windsor, Ashtabula County, Ohio, where the original tree is now growing on the farm of S. A. Lathrop. Its fruit is very highly esteemed by all who have tested its value, for all culinary uses. It differs from all other Apples we have seen, in the *beautiful whiteness* it retains when dried, and its tenderness in cooking. The fruit is of medium size. Form—globular, with a smooth and regular surface. Color—dull greenish, dotted with greyish specks. Stem—

medium size, three-fourths of an inch long, set in a shallow and regular cavity. Calyx—in a broad, open, not deep basin. Flesh—white, tender, and juicy, with a sprightly subacid flavor. In season from September to December. Mr. NORRIS omitted to speak of the nature or habit of the tree; but, judging from the scions received, should think it a vigorous grower, with darkish shoots dotted with greyish specks.

The *Jacksonian* is another seedling Apple of the same town, and was raised on the farm of the Rev. JOHN NORRIS, one of the "old settlers" of the place, and a great admirer of Gen. JACKSON. Hence the good old man christened his favorite Apple after the hero. Mr. L. NORRIS speaks of it as an excellent winter Apple, and describes it of medium size. Form—roundish, with the surface a little irregular and undulating. Color—a rich yellow ground, striped and splashed with a fine clear red, which on specimens exposed to the sun prevails and assumes a beautifully dark hue. Stem—short, set in a deep cavity. Calyx—in a deep basin. Flesh—white, splashed with bright red, crisp and juicy. In season, from December to March.

The same town boasts of yet another seedling Apple—a choice sweet one. The seedling tree is growing in the same orchard with the *White Beauty*. Mr. NORRIS speaks of it as having a rich honey-sweet taste, and thinks it stands quite unrivaled for making preserves or apple butter. It has received the name of *Honey Sweet*.

From the interest Mr. NORRIS takes in disseminating choice seeds, &c., I have no doubt he would cheerfully supply sample scions of these fruits to those who might properly apply for them. T. E. WETMORE.—*North Cannon, Michigan.*

MR. MATHEWS' CURCULIO REMEDY TO BE TESTED THIS SPRING, BY COMMITTEES.—Having received a letter from Hon. JAMES MATHEWS, of Coshocton, Ohio, requesting me to act as an agent for him in the Eastern States, with reference to his Curculio remedy, and having given my consent to act in that capacity, I now give notice that he has communicated said remedy to me, and that I am a duly authorized agent to have committees appointed, and before them to test his Curculio remedy the coming spring. With this view, therefore, I have written to the officers of the Boston Horticultural Society, New York State Agricultural Society, and the Onondaga County Agricultural Society, requesting that a committee of three persons shall be appointed by each Society, to examine into the application of this remedy, its cost and facility as regards application, &c., and report its effects in detail to the said Societies the coming fall, or when the crops of Plums are beyond all danger, and perfectly secured.

As Mr. MATHEWS (as well as myself) has had numerous applications for State, County, and individual rights, the latter varying in offers from $10 to $100, I am instructed by Mr. MATHEWS to say that "he has determined to communicate the discovery to no one, until it has been submitted to and received the *favorable* report of at least *three horticultural committees*, composed of men in whose *skill* and *integrity* the public will have the utmost confidence; after which he will forthwith give notice in the horticultural journals that he is ready to communicate the discovery with specific printed instructions, whenever he has received from horticultural committees or individuals offers of rewards, which in the aggregate shall amount to such sum as he may think a sufficient remuneration for his trouble, in proportion to the importance or value of such a remedy; and when such rewards are offered, he will forward the instructions to all at the same time. Or, should the Legislatures of one or more States deem the discovery of sufficient worth to the citizens of their several States, so as to make appropriations that will be satisfactory, in that case he will agree upon the receipt of such appropriations, to make the remedy public for the benefit of any or every body."

As that correct pomologist, Mr. HUMRICKHOUSE, lives so close to Mr. MATHEWS, and will have so fine an opportunity to see the results of his remedy, as applied by himself, (Mr. MATHEWS,) may we not be permitted the coming season to have a few lines from his pen? A. FAHNESTOCK.—*Syracuse.*

New Fruits and Flowers.—I was glad to see the strictures upon what have been represented as two of the latest and most remarkable horticultural and floricultural acquisitions, and for *one* of which I have been informed from $20,000 to $30,000 were paid last spring! This was the *Augusta* Rose, of which I had the good fortune to obtain a budded plant about eighteen inches in length, (in place of being on its own roots, as I ordered it,) at $5. There was one point of the *first* importance to people residing in the latitude of Boston, in which they were misled; this was, its being represented in the papers accompanying the circular, as a "*hardy out-door runner.*" One communication, however, alone spoke decidedly on this point; but as this one came from a source that was thought worthy of credit, many were probably induced by it to purchase it that would otherwise have waited and been satisfied of its being any thing but a "*hardy out-door runner,*" as has since been stated in the *Horticulturist.*

The other plant is Mr. Bull's new Grape, about which there appears to be some slight difference of opinion, as I learn from your last number. When you publish a drawing of any new fruit, it should be distinctly stated whether the cut is intended to give the *fair average* size, or to be a *remarkably large* specimen. If nothing is said to the contrary, it is presumed, if the public are treated *fairly*, that the cut represents a specimen of an *average*, under good cultivation; and some of your correspondents say that the drawing of this Grape is fully one-third larger than any they have seen; and some deny its being equal as a table Grape to the *Isabella*, which does not agree with the statements that have been set forth in its favor—besides its maturing its fruit four weeks earlier than the Isabella. The *Diana* Grape, some four or five years since, was sold, if not as high as the above, nearly so, and was represented as altogether superior in quality and early maturity to the *Isabella;* but little, however, has within a year or two been heard of it, and judging from specimens exhibited at the annual exhibition of the Massachusetts Horticultural Society in 1852, which was about the 17th of September, purchasers paid dear for their whistles. A few plants of *Catawba*, that I have allowed to take their own course in cultivated ground, appear to ripen their fruit about as well as the *Diana*, under the same course of treatment. By the recommendation of your esteemed predecessor, I planted a vine of the *Purple Fontainbleau;* but the fruit is rather small, and resembles in flavor somewhat a *Catawba* not fully ripened, and I think will not prove here equal to what he expected.

One other plant I see so much lauded by some one in your last number, is the once famous Greville Rose, which was first brought into notice in the United States under the management of a gentleman who has not yet forgotten the most successful way of getting up an excitement when he wishes to make sale of a great number of any new plant at $5 each; but this fell so far below the expectations of all who fully believed the statements put forth at the time, that most of the purchasers in this vicinity pronounced it a *humbug;* which, judging from the fact of its being so very seldom planted, would seem to be correct.

Now I do not wish to convey the idea that the Grape, or the *Augusta* Rose, are *humbugs;* but having failed in almost every instance where I have paid an extravagant price, I think I shall wait till I can have ocular demonstration of the superiority of this fruit.

A new Willow is mentioned in Mr. Downing's communication as being superior to all other varieties of Osiers, imported by Dr. Grant. Can Mr. Downing give the name of it? Is it for sale? and if so, by whom? If so, he will oblige at least C. W. P.—*Newton, Mass.*

Preservation of Quinces.—My Quinces were gathered carefully, about the 1st of October, and spread upon sheets in an unoccupied room, where those left for family use remained until freezing cold weather. They were then carefully taken up in a tin pan, and placed in a cool, dry cellar. A portion of these were made up on the 8th of March, being in a tolerable state of preservation; that is, three-fourths of them sound. Fruit carried a distance and sold in market, could not of course be thus kept. C. E. Goodrich.—*Utica, N. Y.*

THE PRESERVATION OF GRAPES IN WINTER.—I have long been in the habit of saving Grapes for winter use between bats of cotton. I have always found a tendency to mold, from, as I suppose, the too close texture of the cotton bats. Last autumn I gathered my principal crop of Grapes (*Isabella* and *Catawba*) on the 7th of October—about 200 lbs. In the pressure of other business, they were left spread thinly on sheets, in a dry room, until the 2d of November. This was a fault, as I was aware at the time, since they not only shrivelled badly, but mildew began on the stems. They were then packed—one half in cotton, as usual, and the remainder in *dry Maple leaves*, in alternate layers of each, as in the case of the cotton.

And now for the result. Those put down in the Maple leaves kept much better than the others. The advantage of the Maple leaves over the cotton is, they pack less closely, and so do not exclude air; they do not stick to the decayed berries and the sharp portions of the stems; and they have, in case of any incipient decay, less power to communicate a bad flavor. Indeed, Maple leaves, gathered soon after they have fallen, are perfectly clean, and without scent. I should have said, before this, that these Grapes are yet good, and are now in use.

Theoretically, I have long thought, and do still think, that packing in clean sand would be preferable to any other mode. Sand washed from the vegetable matter that is often mixed with it, is as clean as the new fallen snow, and perfectly insoluble in any common vegetable acid. It can not, therefore, impart the least flavor to fruit buried in it. It has the further advantage of most closely enveloping fruit, especially the berries of Grapes, so that they are separated from each other; at the same time, its dryness will absorb the moisture that may be imparted by a decaying berry. Sand can be readily washed, and dried in the heat of summer; and the same mass could be used from year to year, by being annually washed. C. E. GOODRICH.—*Utica, N. Y.*

MY OWN EXPERIENCE IN TRANSPLANTING.—It is truly gratifying to find, in the last number of the *Horticulturist*, so correct a view, and such valuable suggestions presented by the editor, in regard to the transplanting of fruit trees. We discover of late an increasing inquiry in relation to this matter; yet I apprehend that much information is still wanting to convince the public mind that a consistent and judicious course of treatment—a course best calculated to preserve a uniform growth of newly planted trees, and to promote their prosperity and vigor through life,—although it may be attended with some extra trouble and expense, will in the end prove most beneficial and satisfactory. The views marked out by the editor are much in accordance with my own. I wish, however, that he had been a little more definite and explicit in regard to deep planting, the construction of the borders, and the component materials to be placed about the roots. Deep planting I conceive to be one of the most fatal errors in forming new plantations; and the most difficult to correct, as the people generally do not seem aware of its injurious effects.

It is not my intention to criticise upon what has been said, and well said, by an experienced Editor, but simply to point out my own experience, and the course I have adopted and practiced of late years, in relation to the transplanting of fruit trees; and this I will confine to a small orchard of Apple trees, 85 in number, set in the fall of 1851, which was an unusually dry season, thus rendering transplanting more difficult. The winter previous, I drew four cart loads of peat earth thrown up from a muck swamp a year previous. This I placed upon the ground prepared for the orchard, and added the same quantity of fine yard manure, mixing the eight loads together for decomposition. Directly after harvest I laid out my ground in diamonds, thirty-five feet apart in the rows. My soil is rather a sandy loam, with gravelly subsoil. I then turned up a deep cut back-furrow one way of the rows about six feet wide, as I intended cultivating the ground the coming season. Quite early in the fall I prepared the border for the reception of the trees. The holes were dug four feet wide and two feet deep, carefully placing the surface soil by itself and the subsoil in a separate heap. About the 17th of October I commenced setting the trees. The holes were about half filled with the partially rotted sods from the back-furrow nicely placed

together. Then the heap of top soil previously thrown out was thoroughly mixed with a portion of the compost heap, at the rate of one cart load to about eleven trees, and the remaining portion of the holes filled with this mixture of fine mold, leaving the mold in the center, where the trees were to be placed, some four or five inches above the level of the surface, and the borders about the same depth below the surface, leaving the mold to place the roots upon in the form of a little hillock. After smoothly paring off the mutilated roots, the tree was placed upon this little mound, and the roots extended, leaving them in their natural position; then with a shovel the prepared mold was carefully sifted upon the roots, guarding them with the hand during the process. The roots being thinly covered, I then sifted on about two quarts of slaked lime, and the same quantity of wood ashes; then filled up the hole with the remainder of the prepared soil, leaving the top roots at the base of the stem just covered, and these top roots at least four or five inches above the level of the surface, to allow for settling. This I conceive very essential to the well-being of the tree, that it may at all times receive a sufficiency of light and air. When placed in this position in windy, exposed places, they may require fastening for a time, by a small stake; but this I did not do, with the exception of a few trees. I then placed about the base of the trunk a sufficient quantity of earth or sods to guard the roots during winter; this to be entirely removed the following spring.

In the early part of spring I shortened in the entire tops, taking care to balance the same, and to remove all superfluous branches, leaving from four to six equally arranged on all sides. Instead of mulching in the spring with coarse litter from the yard, as I had previously done, I applied sawdust from the mill, which I found a good substitute, drawing the sawdust from the trees in the fall. These trees all lived, and to all appearance scarcely received any check in their growth the ensuing summer, and have continued to grow and flourish beyond my most sanguine expectations, and attract the admiration of those that pass by, especially those who take an interest in horticultural pursuits. DANIEL E. GEROW.

IN your number for this month is an interesting article upon the greenhouses of Messrs. EATON & Co., Buffalo, with the ground plan, &c. As it is evidently an admirably arranged establishment, that many may perhaps desire to profit by, would it not be well to obtain from them *the elevations*, that we may see how it looks externally; as also that we may see how to turn the corners at 2 and 6, or 3 and 5, and the mode of uniting the roofs of 2 and 3 with the octagonal conservatory? The total cost of as complete an establishment would also be desirable.*

I do not agree with some of your correspondents that the "Pear subject" is overdone, or that "LEPERE's pruning" is void of interest to cultivators of the Peach in this country. I, for one, have adopted many of his ideas, not only on my espa`iers outside, but also in my fruit-house on Nectarines and Apricots.

While writing, we are threatened with serious injury to the just opening buds of our Grapes in the cold house, from a violent snow storm, with the thermometer already at 30°, and prospect of dropping still lower before morning—(10 o'clock Sunday evening.) The fruit buds of Peaches, Nectarines, Apricots, and Pears outside, I think are not sufficiently developed to receive injury; but the Strawberries, Potatoes, Peas, and other early forced vegetables and fruits that have progressed rapidly the past few days, in their new quarters, will feel the sudden change, and disappoint many an ardent cultivator. A CONSTANT READER.—*New York, April* 17.

DES NONES PEAR.—The Pear called by this name by Messrs. THORPE, SMITH, & Co., of Syracuse, is doubtless the *Des Moines* Pear, they having probably misread its French title. This will probably explain why the *erroneous name* is not found in other catalogues. P.

* Will Mr. EATON favor us with the desirable information, and oblige us as well as our readers.—ED.

DES NONNES—*not* DES NONES.—In noticing a new Pear, in the *Horticulturist*, for November, 1852, which had then recently fruited in the Syracuse Nurseries, I gave the name as I found it in an invoice of fruit trees received from M. LEROY, of Angers, namely, "*Des Nonea.*" The French Dictionary gives no satisfactory solution to the inquiry as to the fitness of this name applied to a fruit. I was gratified, therefore, to find in M. LEROY's last catalogue, under the head of "New Pears," the name *Des Nonnes.* This term has a signification, is quite satisfactory, and very French; so that now we have these plurals—each indicating *a* fruit—*Des Jardins, Des Chasseurs, Des Templiers, Des deux Sœurs, Des Moines,* and last, though not least, *Des Nonnes;* and a very dainty pomological cannibal can devour a chapter of Knight Templars, a brace of sisters, a monastery of monks, a convent of *nuns,* or even several gardens, (the number being left indefinite,) almost literally at a morsel. As some confusion of names in our line is already extant, I deemed it well enough to call attention to this instance, and, as the Pear is one which is likely to become better known, to give it a chance *to start right.* Hence these lines. J. C. HANCHETT.—*Syracuse Nurseries.*

RHUS COTINOIDES (NUTT.)—In the January number of the *Horticulturist* the culture of the "Sweet Gum tree" (*Liquidambar styraciflua*) is recommended. This is well, and we hope it will be commonly cultivated; because it is indeed a hardy, beautiful tree, quite common in the Middle and Southern States from Pennsylvania to Florida. There are many other American trees and shrubs highly ornamental, which we would be glad to see in general cultivation, among which is the *Rhus cotinoides* of NUTTALL, resembling, as its name indicates, the *Rhus cotinus,* or "Purple Fringe tree," a native of the south of Europe and Middle Asia, which is quite common in pleasure-grounds in this country. NUTTALL discovered the *Rhus cotinoides* on the high rocky banks of Grand river, Arkansas, where he obtained specimens of it in fruit only, which he deposited in the herbarium of the American Academy of Science at Philadelphia.

On the 6th of April, 1812, we found it both in flower and fruit, in descending the mountain on the road from Blountsville to Huntsville, in North Alabama. It was from two and a half to three miles south of the ferry on the Tennessee river, from which the Madison turnpike leads to Huntsville. There was an open space on the rocky side of the mountain, on which were many lilac-like shrubs of this beautiful Rhus, mostly in fruit, nearly all of which was abortive and covered with numerous hairy, shaggy-like pedicels, which render this Rhus so very ornamental. Next day we met it again in the woods, near the residence of a Mr. BAILUS, twelve miles from Huntsville, on the road to Salem and Winchester, in Tennessee. Here it attained the size of a tree at least a foot in diameter, and from thirty to forty feet in height.

I have been thus particular in describing these localties, in hope that some one will introduce it into cultivation. It certainly is equal in beauty to the *Rhus cotinus.* It is larger, and its leaves are larger and more oblong. It flowers at least six weeks earlier, allowing for the difference in climate. We saw the common Locust, (*Robinia pseudo-acacia,*) which is indigenous in the mountains of Alabama and Tennessee, in flower at the same time. S. B. BUCKLEY.—*West Dresden, N. Y.*

PAMPAS, DEKALB CO., ILL.—SOIL, CLIMATE, PRODUCTIONS, &c., &c.—This town is situated a little east of the center of the county, and the county is about the center of the State east and west, and in the second tier from Wisconsin line. The soil is a black muck, in the low grounds, from one to two feet deep; and as the ground ascends, the soil grows less black and of less depth, so that on the ridges it is not generally more than about six inches. The subsoil is of a clayey nature, sometimes mixed with gravel, and grows more dense and impervious to water as we descend into it. At the depth of 12 to 16 feet we find blue clay or gravel. The water is what is commonly called hard, or brackish, but cool and clear. There are no swift running streams. Sloughs, or marshes, are common, which usually produce an abundance of grass for hay. Water is found by

digging from 2 to 20 feet in any place. The spring is usually rather cold and backward; sometimes extremely dry, and sometimes extremely wet. The summers are cool and comfortable. The autumn is delightful—almost all one continued Indian summer until December, (I run the plow on the 15th, 16th, and 17th days of the latter month this year,) giving the farmer ample time to gather his bountiful crops. The winters are sunshiny and pleasant, except a few weeks, which are severely cold, even dangerous to venture far from home unless amply protected by clothing. The productions for export are wheat, (mostly spring,) oats, corn, buckwheat, rye, barley, beef, pork, butter, eggs, poultry, and wild fowls. We are rather backward in the horticultural department. Many of the first settlers, who have been here 12 or 15 years, are just setting out orchards. Fruit trees of all kinds grow with extreme rapidity. I know of some Apple trees, five years from the nursery, which are six inches in diameter, and bear two bushels of fruit. English Cherries do extremely well. I have eleven, set three years last spring, from the Buffalo Nursery. They were then about one inch in diameter; and some now measure over four inches in diameter, and have borne fruit every year since they were set. I have some common red Cherry trees, four years' growth, that measure sixteen inches in circumference. These trees have had no extra culture or manure. Plum trees grow well, and bear well. The country is very natural for Plums, and many grow wild in the woods. Raspberries, Currants, and Strawberries, do extremely well. Peach trees grow very fast and bear large crops; but are very likely to kill by the severe cold of winter. On the whole, I think there are but few places where can be raised better fruit, or more of it, than here. S. W. Arnold.—*Pampas, DeKalb Co., Ill.*

A Letter from Muscatine, Iowa.—We have seen it stated, that there was soon to be started "A Nurserymen's Express." In the far west we feel the want of such an express very much. The western people will go largely into the cultivation of trees and shrubbery. Experience has proved that almost every variety of tree and plant cultivated in New York and Pennsylvania will do equally well, and, as a general thing, grow more thrifty. The warm weather of fall and spring sometimes injures the Peach. No portion of our country has ever been settled where so much attention was given to fruit growing as in the northwest; and our labors have been crowned with great success. The Northwestern Fruit Growers' Convention, held at Chicago last October, as well as every Agricultural Fair, is a plain demonstration that we do not live upon corn and pork alone, but we have a taste for fruit also; and our western soil and climate are quick and bountiful in the great luxury of fruit. S. F.

To the Victim of Happy Contentment.—*Friend Atticus*—I fear my prolixity has taxed your patience, so I come at once to my plan. I hope you will appreciate the benevolence that prompts my efforts. It is simply this, that *we* exchange places;—as your physician, I recommend such a change. I know you will be happy. The exhaustless energies of your mind will revel in active exercise in a sphere which, for awhile at least, might seem limitless. You would find something new to do all the time; and then what you had done would show in such bold relief—to such advantage—that you would be in danger of growing vain of your own accomplishings. While you were thus pleasuring yourself, I would try and content me in your home, prosy as it might seem to a stirring westerner, with all its attained excellencies and perfections—for we have become so habituated to a life here where everything is *being* done, that we might be restive in a land where anything was finished.

I hope you will not accuse me of vain egotism when I tell you how fond I am of beauty wherever it is found, and of my cultivated and refined tastes—though indeed they might seem a great bother just now; but I try to keep them burnished for that happy by-and-by, when I trust they will find scope for exercise. I only tell you this because I know I am a stranger to you, and you would like to feel that all your gathered perfections would not be like sweetness wasted on the desert air. I have a whole troop of little Olive plants; and they too admire the beautiful.

In spite of farmward and household cares, I struggle to train them mentally, morally, and physically. I have my own peculiar notions about their education, and can fancy many facilities in your home which might lighten my occupation. I fancy, with the surroundings of comforts and beauties, I could teach them with better success, and more clearness; and they would show evident signs of improvement. At any rate, I should find more time there to devote to their culture. Thus I would try to make the time of my exile for your sake, pass with profit and usefulness. By this arrangement we should enjoy a little of the rest and quiet pertaining to luxury, which would have the advantage of novelty for us. No doubt this change for ourselves, as well as yourself, would tend to the rejuvenating and brightening our powers amazingly. I would promise, for my better half as well as for myself, that all should be kept in perfect order. I know my husband must have the bump of order; for he declares he loves to have a place for everything, and a wife that knows how to keep things in their places.

In the meanwhile, you may take those four or five reserved acres, and occupy yourself thereon. Upon it is a fine grove of native trees of different sorts. They are already thinned, and the underbrush cleared away, and the sloping hill-sides cleared and broken up, and under cultivation. You may erect a large, convenient, tasteful residence, with all its appurtenances—not forgetting the conservatory and aviary, which are among the pet dreams of my ambition. You may make winding roads and broad lawns. The trees you may thin out, and so group them to suit your most fastidious taste; and among the indigenous occupants of the soil, you may intermingle those of rarer beauty. Shrubbery and plants rare and beautiful, you may gather in full profusion. Fences you may build, and hedges plant. You may erect green houses, graperies, and espaliers. On the hill-side you may lay out such a garden as is seldom seen, except in books and imagination. I may sometimes be tempted to envy your occupation, as I wander in fancy from my temporary home to you and your labors. How will your happiness be enhanced by the thought, "all this I am doing not merely for my selfish gratification, but for the happiness of so many who are capable of enjoying the results of my work with the proper appreciation they deserve. What pleasure to shorten for them the interim between their dreams and bright actualities, which might take them plodding years to accomplish."

Let me add, that a thriving, pretty village is only a mile from us, and upon which from our height we look down, and by railway only twenty miles from one of our greatest western marts; so that any thing you may choose to have from the east, may be conveyed almost to your gates. You need only to bring with you a little ready means, and that good judgment and intuitive perception of the true in taste and beauty, with quick energy and decisive action, which I am sure you possess. In two years you may make this all we wish, and perhaps accomplish your entire recovery. Then we may return to it, and be happy the rest of our lives, and you will have fortified yourself forever against ennui and discontent—which, with all their protean forms, will assail you if you yield to the syren charmer—and rest yourself in quiet content. This, Sir, is my prescription. That you may work out your perfect cure, is the sincere wish of your true friend. ELSIE.—*Woodside, Waukesha, Wis.*

LETTERS FROM THE WOODS.

The Woods, April 14, 1854.

THE spring, so long and so anxiously looked for, comes on apace. Already the snow is melted from the southern slopes of the hills, and the grass looks fresh and green by the side of the rivulets that flow down in the valley. The Willows by the old stone bridge—where meet the brooks, known in my younger days as the "Great" and the "Little,"—shed a sweet fragrance upon the air, and the Birch and Maple buds are swelling upon the trees in the open pastures and meadows. The Arbutus (Epigea.—ED.) and Violet are in blossom, and beauty is spread abroad

through earth, and sea, and sky; and dwells now, if it does not at all times, in the face and heart of man. From my chamber window I look out upon the warm blue sky and the dim old mountains that skirt the horizon, and bless God, who made "the country."

It is well that there yet remain some portions of our country which are not swallowed up by the all-absorbing "town." I am thankful for the privilege of viewing God's works, *unimproved* by the hand of man. Those patches of woods, that stand out here and there upon the landscape, —those groves, so beautiful because so natural, —I prize as the miser prizes his gold. Rusticus would cut them down, and sow wheat where they stand: but my "no" is emphatic; and my groves will still cool the air, and afford me shelter from the scorching sun of summer.

My bees, awakened by the genial warmth, are flitting around the hives; but many of them who come forth I fear may never return. How gladly must they hail the approach of more pleasant weather! —how delighted to know that the reign of the Ice-king is broken, and that the Queen of the flowers will soon scatter her blessings over all the broad fields of our quiet domain.

Towser, my highly-prized Newfoundland, enjoys the sun amazingly. He lies stretched out at full length on the sunny side, half-asleep and half-awake, a perfect picture of content; and the cackle of my Cochin Chinas in the yard, and the songs of the robins in the trees, alone break the stillness which hangs around my "box in the woods." Z.

April 18, 1854.

A ROBIN is busily engaged in building her nest on the cap of my window, and she sings merrily as her work progresses. Doubtless she is as happy as we mortals are while building *our* houses, in which we hope to pass in quietness the declining days of life. With what care she selects the sticks of which the outside of her nest is composed; and how much taste she displays in bringing together the feathers, hairs, and soft pieces of bark, which form the inner lining of the nest. I wake, long before the dawn, to listen to her joyous song; and regret that man may not be as happy as are, apparently, many of God's creatures, who are less gifted.

The red buds of the Pæony are pressing up among the dead stalks of a past year's growth. Strange, that the few brief glimpses of the warm sun should so soon have called them forth. I see they are increasing in size day by day; and, as I cut down the old stalks, I am astonished at the great number of shoots which are springing up.

Birds love music. As I sat under a tree in front of the house, this morning, I took my flute and commenced playing a lively air. I noticed a couple of robins on a tree a few rods distant, who, as I continued playing, flew to the ground, and hopped along, stopping occasionally to listen, till they got within a few feet of me; and there they stood, turning one side of their heads toward me, and then the other, till I put up my instrument, when they flew away.

Spring is the most poetical of all seasons. What can be more beautiful than the following lines, by *the* poet of Nature, THOMPSON?

"Moist, bright, and green, the landscape laughs around.
Full swell the woods; their every music wakes,
Mix'd in wild concert with the babbling brooks
Increased, the distant bleatings of the hills,
And hollow lows responsive from the vales,
Whence blending all the sweeten'd zephyr springs.
Meantime, refracted from yon eastern cloud,
Bestriding earth, the grand etherial bow
Shoots up immense. * * * *
Then spring the living herbs, profusely wild,
O'er all the deep green earth, beyond the power
Of botanist to number up their tribes;
Whether he steals along the lonely dale,
In silent search; or through the forest, rank
With what the dull incurious weeds account,
Bursts his blind way."

Z.

Kitchen Garden.

VARIETY AND PROPERTIES OF MANURES.—The manures in general use in gardens are numerous, but I shall only notice those which I consider the most useful; and of these, the dung of horses, if not the best, is certainly the most general in use.

Next to the dung of horses, that of oxen and cattle is in the greatest request; and if slightly fermented, is an excellent manure for light, hot soils. It is also well calculated for soils of a dry, absorbent nature, as it retains its moisture for a greater length of time than most others.

Green vegetable matter is an excellent manure, but less attended to than it ought to be. Instead of collecting all useless vegetables, &c., in a garden into one heap, let the following simple mode be adopted: When a piece of ground is to be dug, go around and collect all the decaying vegetables, and immediately dig them in. The sweepings of grass walks and lawns are also of much use as a vegetable manure; and on being brought into the garden, they should be dug in before fermentation commences; but it must be observed, that they should not be buried at too great a depth, otherwise fermentation will be prevented by compression and the exclusion of air.

Sea-weeds, where they can be procured, make excellent manure for most vegetables, but particularly for Sea Kale, Artichokes, and Asparagus. This manure, however, is very transient in its effects, and does not last more than for a single crop, which is accounted for by its containing a large portion of water, or the elements thereof.

The dung of birds, either wild or domesticated, affords a powerful manure, particularly that of the former. Pigeon's dung is in great repute, but it should only be used as a compound; or, if used as a simple manure, the greatest care must be observed in the distribution of it. It is a good manure for Strawberries and Raspberries; also the Fuchsia, Pelargonium, Coxcomb, Balsam, and it is indeed a rich manure for all potted plants that will bear rich feeding.

The dung of sheep affords good manure, but it is seldom used in gardens.

Soot is a very powerful manure, and ought to be used in a dry state, and thrown on the surface of the ground. It is advantageously used in crops of Onions. It is sown at all times with good effect, and where it has been sown no maggot has appeared.

The ashes of wood, if not too much burnt, is a lasting manure, particularly for the Grape Vine and Pear; and if sown among Turnips, it is of great use to protect them from the fly.

Of all mineral manures, lime is most known and generally used. It should, however, never be applied with animal manures, unless they be too rich, or for the purpose of preventing noxious effluvia. It is injurious when mixed with any common manure.

Manures, whether animal or mineral, are of such importance to vegetation, that all possible diligence should be used in the collecting and preparing of them for the different purposes for which they may be required. By a proper application of them, and by a rotation of cropping founded on just principles, the worst garden ground may be not only improved, but rendered fit for the production of every vegetable that is usually cultivated in the different localities of this country. ALFRED CHAMBERLAIN.—*Gardener to Delancy Kane, Newport, Rhode Island.*

Answers to Correspondents.

BEING a subscriber to your valuable *Horticulturist*, I beg to say that the recommendations I have frequently seen and heard of ashes being a preventation against the Peach tree borer, cannot be depended on. I carefully examined my trees last autumn, and cleared out and fully eradicated every borer I could find; and put around each tree about half a peck of ashes. Yesterday I examined the same trees, and found them nearly all affected, and from one three year old tree I extracted full a dozen borers. Therefore I conclude the only remedy is war to the knife. Is it so? JOHN POWELL.—*Dayton, O.*

It is possible that the performance of some part of the process was imperfect, as it is beyond a doubt that ashes placed around the tree at the place where the borer deposites its eggs, *generally* prevents its attack.

I AM building a cold grapery, 22 by 60 feet. I have excavated three feet deep, and filled with a good compost. In your opinion, is a drain necessary? If so, how made? JAMES M. TAYLOR, *Syracuse, N. Y.*

If the subsoil be sandy and porous, draining may not be necessary; but in most cases it is

useful. Make it two to three feet deep below the level of the bottom of the border, and 18 or 20 inches wide, and fill with small stones, laying some sods or straw over them before the earth is laid on. The drain to be under the center of the border and carried to some outlet, or to some distance from the border. Such a mass of rich soil as a vine border soon becomes sour, unless surplus moisture can pass off freely.

Notices of Books, Pamphlets, &c.

ELLIOT'S FRUIT BOOK; OR, THE AMERICAN FRUIT GROWER'S GUIDE IN ORCHARD AND GARDEN. By F. R. ELLIOT. New York: C. M. SAXTON, 1854.

FOR several years past a book on fruits, or "A Western Fruit Book," has been occasionally announced as forthcoming from the pen of F. R. ELLIOT, and we have at length the pleasure of seeing it on our table—a well got up duodecimo volume of nearly 500 pages, very much on the same plan as *Thomas' Fruit Culturist.* It is profusely illustrated with outlines of fruit, differing from the outlines in other works in having the core in kernel-fruits, and the stones in stone-fruits shown, also in having the stem and calyx cavities shaded. This will be regarded by some as an improvement, but does not strike us as of very great importance.

Mr. ELLIOT has for a long time given much attention to the examination and comparison of fruits, and having had the advantage of the latest experience of cultivators, and the latest works on the subject, has undoubtedly made a book that every man engaged in fruit culture may consult with advantage. If Mr. ELLIOT ever intended to make it a "Western Fruit Book," he has evidently changed his mind; for, with the exception of an occasional remark, and the description of a few western fruits, we see nothing particularly western in its character. Nearly all that relates to the propagation, culture, pruning, and training of trees, and the preservation of fruits, is copied from other works; and for our own part, we must say that we have derived more information in regard to the peculiarities of western soil, climate, and culture, from the report of the Fruit Grower's Association, than we have been able to glean from Mr. ELLIOT's 500 pages.

Mr. ELLIOT had a fair field for both fame and usefulness. The great States of Ohio, Kentucky, Indiana, Michigan, Illinois, Wisconsin, and Iowa, are rapidly turning their attention to fruit culture. The authors who had previously written on pomology, knew from actual experience and observation very little of these States, as regards the influence of the soil and climate on the culture of fruit; and fruit culture had made so little advancement that scarcely any reliable experience could be collected. Here Mr. ELLIOT had the advantage. Valuable results have been obtained during the last three or four years throughout the newer States, and he might have used them to great advantage. We cannot see, however, that he has done so; for in his description of the most popular and important varieties, we seldom find a word said as to their failure or success in the West, and he even omits many valuable particulars given in other works. We are convinced that he has erred greatly in making his work too general—in going over the ground already so fully occupied by DOWNING's and THOMAS' works—instead of devoting his labors to a field yet unexplored. This, however, is his business, not ours; but we must say it, because we think it. When a man writes a book on a subject like pomology, on which so many treatises exist, and these too of recent date, he should avoid the beaten track, and strike out a new course for himself, so as to give character to his work. We have in this great country of ours, embracing

so many climates and soils, room enough for many treatises on the culture of fruits; but if they all follow in the same path, and copy and re-copy from each other, the fewer we have, the better.

The fruits follow in alphabetical order, thus—Almonds, Apricots, Apples, Blackberries, Cherries, Currants, Gooseberries, Grapes, Nectarines, Peaches, Pears, &c. This we do not consider right in a work pretending to science. The natural classes, kernel fruits, stone fruits, and berries, should certainly be grouped together. The varieties also follow in alphabetical order, instead of being classed in regard to season of ripening. Those who consult the book to make selections, will, we think, find this an inconvenient arrangement.

In regard to merit, there is a classification which, if it were entirely correct, would be a very good one. He makes three classes, thus—"Class 1, worthy of general cultivation." "Class 2, new and untested; adapted to certain localities, or amateur gardens." "Class 3, Unworthy of cultivation." Mr. ELLIOT adopted this arrangement in preference to that of the National Pomological Society—"good," "very good," "best,"—which he considers an imperfect guide to fruit growers.

He describes upwards of 440 varieties of apples, which occupy about one-third of the book. In the first class there are 74 varieties; in the second, 221 varieties; and in the third, 147 varieties. It strikes us as rather strange that such varieties as *Bethlehemite*, *Challenge*, *Cornish Aromatic*, *Fallenwalder*, *Fort Miami*, *Golden Ball*, *London Sweet*, *Melting*, *Richmond*, *Rome Beauty*, and many others as little known as these, should be published as worthy of general cultivation; while such well known sorts as *William's Favorite*, *Summer Queen*, *St. Lawrence*, *Keswick Codlin*, *Holland Pippin*, *Pumpkin Sweet*, *Blue Pearmain*, *Twenty Ounce*, &c., are classed as new and untested, &c., in Class 2. Neither do we find in this large list of second class any distinction between "new and untested" varieties, and those adapted to certain localities or for amateurs. This is a very grave defect, because many of them are among the oldest varieties on record.

Of Cherries, 140 are described. In Class 1, 31 varieties; in Class 2, 53 varieties; and in Class 3, 56 varieties. Class 1 contains 19 of Dr. KIRTLAND'S new varieties, not fruited in half a dozen localities in the United States, for general cultivation; while such well-tried, popular sorts, as *May Duke*, *Black Eagle*, *Knight's Early Black*, *Yellow Spanish*, *Carnation*, *China Bigarreau*, *Napoleon Bigarreau*, *Elkhorn*, &c., are classed as new "and untested," or only of local value, or for amateurs. This will appear to many as strange, for it is a well known fact that the *May Duke* is the best variety known for a great portion of the west, where all the Heart and Bigarreau varieties are too tender for the climate. A friend of ours remarked, that he was quite sure that either the author or printer had transferred the varieties to the wrong class by a mistake; and we should not be surprised if it was so. In his third class of Cherries—unworthy of culture—we find the *Large English Morello, and Plumstone Morello*, two of the very best of the class of Cherries in existence, at least, as far as we have known them tested.

Twenty varieties of Currants are described—nine in first class, and eleven unworthy of cultivation. Among the latter class we find the *Cherry*, which is decidedly the largest Currant known, and one we would not exchange for any other variety we have ever seen. Others are recommended which are less known and greatly inferior.

About 420 varieties of Pears are described—54 in Class 1, 222 in Class 2, and 141 in Class 3. In the first class we find such varieties as *Beurre Langelier*, *Brandywine*, *Black Worcester*, *Coit of Ohio*, *Doyenne d'Alençon*, *Honey*, *Kirtland*, *Knight's Seedling*, *Nouveau Poiteau*, *Soldat Laboureur Van Assche*, and many such new and little known sorts,

while in class two we find *Andrews*, *Bloodgood*, *Paradise d'Automne*, *Beurre d'Amalis*, *Bergamot Cadette*, *Capiaumont*, *Duchesse d'Angouleme*, *Henry IV*, *Napoleon*, *Summer Francreal*, and several others of the very best and most widely known varieties in cultivation.

We ask men of experience, and we would put the question to Mr. ELLIOT himself, will not this classification mislead inexperienced people, and be likely to lead to some serious mistakes? We verily believe it will, and we would suggest some immediate alteration.

We note a few changes of name, which will only create confusion. For instance, *American Summer Pearmain* is changed into *American Pearmain; Yellow Bellflower*, into *Bellflower; Twenty Ounce*, into *Cayuga Red Streak; Canada Reinette*, into *Canada Pippin; Yellow Harvest*, into *Harvest; Hubbardston Nonsuch*, into *Sutton*. All these changes are made where the names were well established. Among Pears, we find *Doyenne d'Ete*, or *Summer Doyenne*, changed into *Dean's Summer; Soldat Laboureur*, into *Soldat d'Esperin;* and some half-way attempts to Anglicize French names, thus—*Louise Bonne de Jersey*, is made *Louise Bonne of Jersey*. It appears to us much better to let foreign names alone, than to make them thus half-and-half—neither one nor the other. In a few instances we find the English name, or the English of the name, added to the original. If this had been carried out through the book it would have been a very acceptable feature; but it has merely been attempted.

We note an occasional error and omission, but have not space now to point them out in detail. *Beurre gris d'Hiver*, which is a very promising and remarkably distinct fruit, is not noticed; but the name is given among the synonyms of *Easter Beurre*. *Ne Plus Meuris*, a very well-known, long-keeping winter Pear, is treated in the same way. *Belle Epine du Mas*, or *Duc de Bordeaux*, a well-known and excellent winter Pear, is confounded with the *Vicar of Winkfield*, &c., &c.

We observe a great deficiency of information in regard to the habit and character of trees, except as relates to a few old and common sorts. This is a very important point, and we are surprised that Mr. ELLIOT should have paid so little attention to it.

This book has come before us at a season when we are actively engaged out of doors, and have little time to read; consequently our examination has been hurried and imperfect. We have probably found fault more than is becoming in us; but it is expected that we will give our opinion of it, and we must do it candidly. We have the highest respect for Mr. ELLIOT, and should be sorry to depreciate or speak lightly of his labors. He is a zealous and honest Pomologist, entirely reliable as far as his information extends. The errors we have alluded to, and others, will no doubt be promptly corrected, and the book be made one of the most valuable of the kind in circulation. We commend it to the attention of all interested in the subject.

BUCHANAN ON GRAPE CULTURE, AND LONGWORTH ON THE STRAWBERRY

MOORE, ANDERSON, & Co., of Cincinnati, have issued a new edition of this excellent little work. We give the preface:

"Three editions of this little treatise, within a year, being required to supply the demand for it, would seem to indicate that the public interest in Grape culture is on the increase. The author therefore deems it his duty to give the result of his own experience, and that of his fellow-members of the "Wine-growers' Association," in vineyard culture during the past year. It was found that the severe frosts of January and February, 1852—8° to 12° below zero—killed many of the grape buds in warm exposed situations, and several vineyards in Kentucky, a few miles south of this city, scarcely produced any fruit. The hard frosts of the 18th and 19th of

March did not injure the grape buds, although many apples, such as the *Yellow Belleflower*, were killed in the opening bud; all the peaches, many of the pears, and most of the cherries were destroyed.

"The frosts of the middle of April and second week in May injured the young shoots of the vine, especially in low situations or near moisture, and in the rows near grass; but with all these visitations from frosts, the grape crop was a very promising one until attacked by the *rot*, the second week in July, and subsequently the first week in August—the latter but slight. This disease appeared to affect those vineyards most, that were in low situations, or not fully exposed to a free circulation of air, either from close planting or otherwise.

"High manuring, deep hoeing or plowing, and a want of summer-pruning at the right time, it was thought, increased the liability to *rot*. This disease, or something like it, prevailed in many parts of Europe, last year, where it had scarcely been known before, and in the island of Madeira caused an almost entire failure of the grape crop.

"In this vicinity it cut off about half of the average crop, reducing the product of the whole county to about one hundred gallons per acre. Some made more, but many less than that average. It was observed that the *poor lands* and *high situations* suffered least. It is supposed by some that the *rot* is allied to the *mildew*, and that scattering flour of sulphur over the vineyard, in June and again in July, may prevent the rot, as sulphur is applied as a remedy for mildew, in grape-houses, with complete success. This experiment might be tried. Ashes are certainly a valuable application, scattered over the surface and turned under with the spring hoeing. Dr. Rehfuss strongly recommends this. Insects did but little injury to the vine last year. The one "resembling a small rose-bug" was scarce.

"A new woodcut, to illustrate spring-pruning and summer-training, has been inserted in place of the old one, which was imperfect in some points. In spring-pruning it is found best to *omit* the *first tie*, if the branch is too stiff to bend easily in a circle or bow. This leaves a three-quarter bow or circle. Summer-pruning should be done *promptly;* if deferred too late it is certainly injurious, but be careful not to prune too close.

"The vineyards near Hermann, Mo., are said now to amount to near five hundred acres. The liberal premiums offered by Mr. Alexander Kayser, of St. Louis, for the best Missouri wines, were awarded at Hermann in August last, at a large and enthusiastic meeting of the wine-growers of that vicinity.

"*Schuylkill* Grape has been adopted by the 'Wine-growers' Association,' as the proper name of that heretofore known as the 'Cape Grape'—Cape being a misnomer."

Horticultural Societies.

Brooklyn Horticultural Society.—The second stated Monthly Meeting of this flourishing Society was held at the rooms, Athenæum Building, Atlantic street, on Thursday, March 9th. The display of plants and flowers was not so large or varied as at the former meeting, but was respectable for the season.

Third Monthly Meeting, April 6.—The meeting was held at the Society's rooms. The display of plants and flowers surpassed the utmost expectations of the committee. The exhibition-room was much too small for the articles deposited to be displayed properly, and uncomfortably limited for the convenience or pleasure of the numerous visitors. We hope some more commodious room may be secured for future occasions.

Among the objects on the tables, we noted as novel or choice, Aquilegia glandulosa—a pretty blue and white flowered Columbine—from H. A. Graeff's greenhouses, Brooklyn, L. I.; also, a striped variety of Azalea sinensis, said to be a new seedling—very beautiful; Camellias Hamadryas, Ellen's Favorite, and Washington; six varieties of Cineraria; Tetratheca (Tremandra) verticillata—a very pretty greenhouse plant, with whorls of linear leaves, and bright blue flowers on long peduncles—already familiar to many of our readers; Ornithogalum aureum; Nepenthes distillatoria (Pitcher-plant)—a small specimen; and several seedling Petunias and

Calceolarias—none of the latter of any striking merit, but large and healthy plants. The Camellia Ellen's Favorite is one of HICKS' seedlings, the stock of which is in the hands of the exhibitor. It promises to be a flower of permanent merit—not so liable to sport as Duchess of Orleans, and other striped types, which have lately created so much *furor florum* among the Camellia speculators. We question whether it will bring $1,000, even in trade, as Jenny Lind has done, so much talked of.

A flower of another of HICKS' seedlings was shown us by Mr. T. HOGG, JR., but we could not form any decided opinion as to its merits.

A stand containing sixty blooms of Pansies was shown by Mr. JAMES WEIR, Florist, Bayridge, L. I. Several of the flowers were worthy of notice, especially the dark varieties. They were all seedlings from imported English seed.

I. B. LENOIR, New York, had seven seedlings, also from imported seed, two of which were above the average, both in size and beauty of color, though wanting in substance and form. They may be improved, however. One of them, a large creamy-white flower with dark feathered or laced center, should not be lost sight of. We have, with the permission of Mr. LENOIR, named it *Bessy Kane*, in compliment to a young lady who has a decided taste for this class of flowers, and one who deserves such distinction at the hands of one of our best florists. We trust the variety, though not first class, will serve to elevate the growing taste for florist flowers, and urge the experienced florists of our country to improve the favorite Pansy. Mr. LENOIR has promised us that he will propagate it. The other variety is a dark velvety purple or brown color, large, and of tolerably good form, superior to the majority of American seedling Pansies. It has been named *Peekskill Favorite*, and will prove worthy of notice. Next season we hope to have to report much progress in this department of the florist's business.

WALTER PARK exhibited a well-flowered plant of Weigelia rosea; also, Acacia paradoxa? (probably a gardener's name); Camellias Duchess d'Orleans, Landrethii, &c.; and a large plant of Spiræa Reevesii.

We wish the gardeners and florists would have their plants correctly and legibly named, *for our especial benefit*, if not for their own interest, and the public good.

A stand of flowers in pots was deposited from the garden of FISHER HOWE, Esq.; also, a collection of plants.

Messrs. POYNTER & CANNER had several seedling Cinerarias of merit, also a collection of miscellaneous plants.

JAS. WEIR, Bayridge, L. I., had a very fine table boquet made up of the choicest flowers of the green and hot-houses. Also, fourteen choice plants of Roses, in four varieties, embracing Hermosa, Agrippina, Safrano, and Souvenir de Malmaison. A neatly trained specimen of the three-colored Tropæolum (Tropæolum tricolorum) attracted much notice.

We have perhaps omitted many of the noteworthy items, but such omission is inevitable in a crowded room. We thank two of the competitors for the lists of their objects; it aids us to have such handed us, and would not be much extra labor to the competitors. We hope the committees will have arrangements made to announce their awards at the sitting of the Society on the evening awarded. They have admitted the importance of this. The next exhibition will take place on Thursday, April 30th.

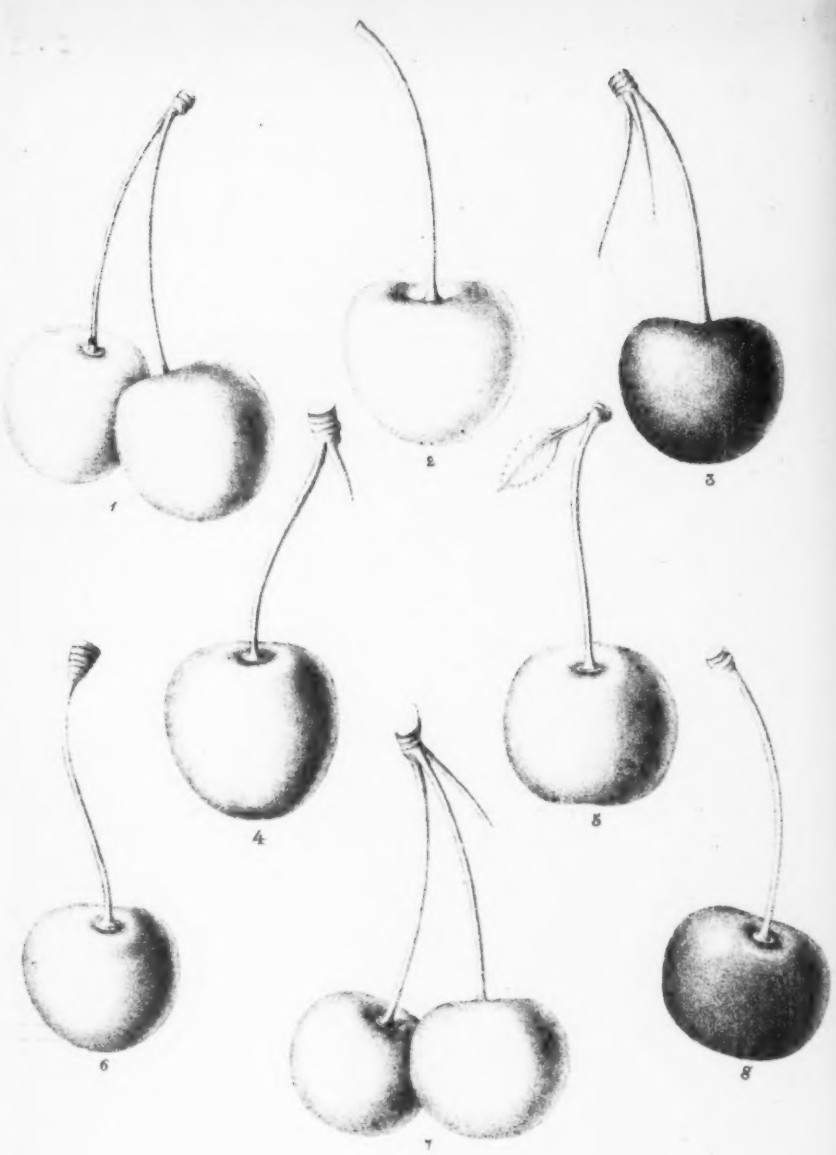
The meeting of the Society was organized in the library-room. The President, J. W. DEGRAUW, Esq., in the chair.

Some important business was transacted as to procuring the room for the first semi-annual exhibition, to be held on the 10th, 11th, and 12th days and evenings of May, at the Athenæum. It is supposed that the display will be unusually fine, and the affair a successful attempt to show that there still exists pure taste in the Empire State.

R. R. SCOTT inquired if any communication had been made to this Society, by the New York Horticultural Society, as to a resolution for the collection of valuable trees and shrubs indigenous to Texas, Oregon, and other lately annexed terrritories, by appointing a committee to collect subscriptions, &c., for that purpose.

The Corresponding Secretary replied that no communication had reached him on the subject.

On motion, adjourned.



1 Elton. 2 Yellow Spanish. 3 Knights Early Black. 4 Napoleon Bigarreau
5 Prime Hortense 6 Burn Snelling 7 Downers Late Red 8 Black Eagle